Advant® OCS
with Master software

Data Base Elements
Advant® Controller 70

Reference Manual

3BSE 009 456R301

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Introduction

This chapter is an introduction to data sheets for data base elements in Advant Controller 70.

Overview

Advant Controller 70 is a Programmable Logic Controller (PLC) system for industrial processes. The system provides a PC programming language and a data base element concept.

The data base elements provide a software concept for the representation of

- The major hardware components:
    - The processor (CPU) module
    - The process I/O modules and their subordinated signals
    - The communication modules
- The common data (DAT/PARDAT)
- The transfer of common data from/to other targets via Data Sets (DSP)
- The transfer of event data via Event Set Send (EVS(S))

In Advant Controller 70 there is a common data area within the target system for the DAT and PARDAT data base elements. There are a common data extended area and a common data event queue area for further internal data (see Table 5). Control modules (CONTRM, …) read and write the other process values directly from/to the related I/O modules connected via the backplane I/O bus.

The data base elements for Advant Controller 70 fulfill three main tasks:

1. They represent process signals, including error signals connectable to PC programs
2. They show configuration data for the initialization of I/O modules or common data area elements
3. They include descriptions belonging to the data base element (names, …)

Data Sheets for Data Base Elements

This description contains the data sheets for all data base elements available for Advant Controller 70.

You can use the information in the data sheets for two purposes:

1. To interpret the meaning of the data viewed in element pictures on the Engineering Station.
2. To check available data types, values and ranges for your modifications of the element contents.

Contents of a Data Sheet for Data Base Elements

Head of the Data Sheet

The head of a data sheet shows in the upper right corner the call name(s) of the element(s) and in the upper left corner the data base element type.

Data Base Element Type

Call Name

RTD module

AI830

Figure 1. Example of Head

Element Type

The element type gives a short description of the data base element. For data base elements of type module or signal the first two characters correspond to the first two characters of the hardware ID.

Call Name

The call name of a data base element describing modules and signals corresponds to the ID of the related modules (for example AI830). For other elements the call name is equal to the element name or is a short mnemonic of the element name.

On an Engineering Station you create a data base element instance by entering the element's call name. Note that some elements are automatically created with others. Their call names can not be used for creation.

Summary

The summary provides a brief description of the element(s).

> AI830 specifies an Analog Input RTD hardware module contained in an Advant Fieldbus 100 I/O station. The data base element contains diagnostic information of the I/O module.
>
> By means of the call name AI830 an Engineering Station will create:
>
> - 1 data base element of type RTD module
> - 8 data base elements of type RTD Input.

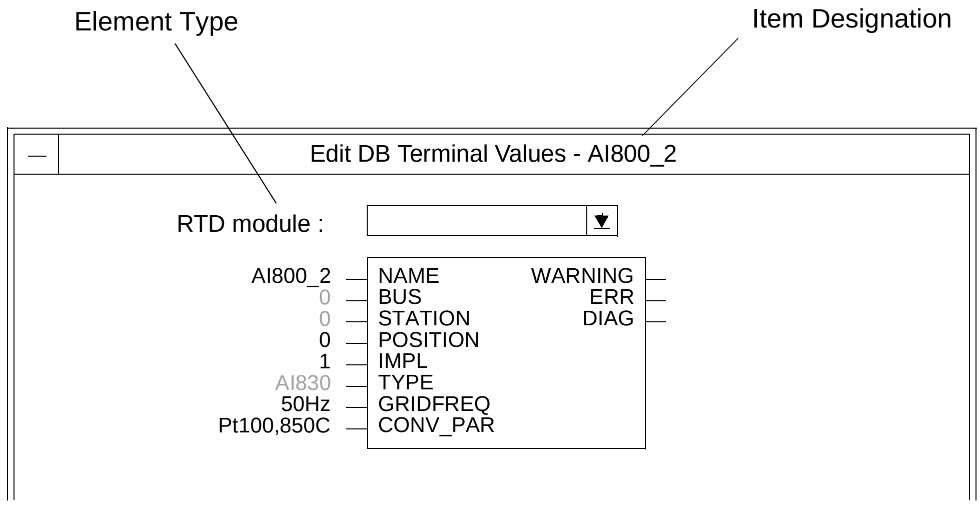
Figure 2. Example of Summary

Picture

The picture shows the element in the same way as it is displayed on the Engineering Station.

The symbol on the top middle of the display shows the header part with the element type. A graphic symbol that looks like a PC element is shown below it.

Simple data base elements consist of one single graphic symbol, whereas more complex elements are split into several graphic symbols. Each symbol has a name that is listed in the header part and the symbol shown below it corresponds to the currently selected name. The data sheet of data base elements with more than one symbol start with an overview picture including all symbols. This overview picture cannot be displayed on the Engineering Station.



Element Type

Item Designation

Edit DB Terminal Values - AI800_2

RTD module :

AI800_2 — NAME
0 — BUS
0 — STATION
0 — POSITION
1 — IMPL
AI830 — TYPE
50Hz — GRIDFREQ
Pt100,850C — CONV_PAR

WARNING —
ERR —
DIAG —

Figure 3. Example of Picture

In Advant Controller 70 the graphic symbol of a data base element has the following general representation:

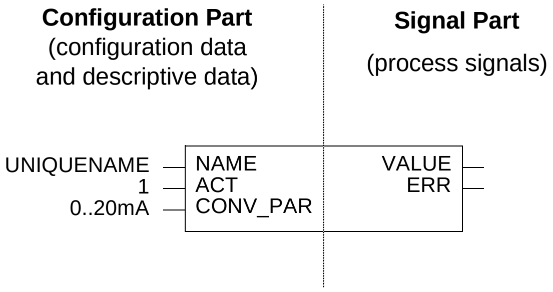


Figure 4. General Representation

Graphic Symbol

The graphic symbol is a box with terminals representing each data value. Configuration and descriptive data are shown to the left, process signals to the right. The names inside the picture are terminal names to identify the data. They are used for connections of PC elements to data base elements. VALUE is the default name when connecting. The configuration and description data is entered outside the box at the terminal names.

Item Designation

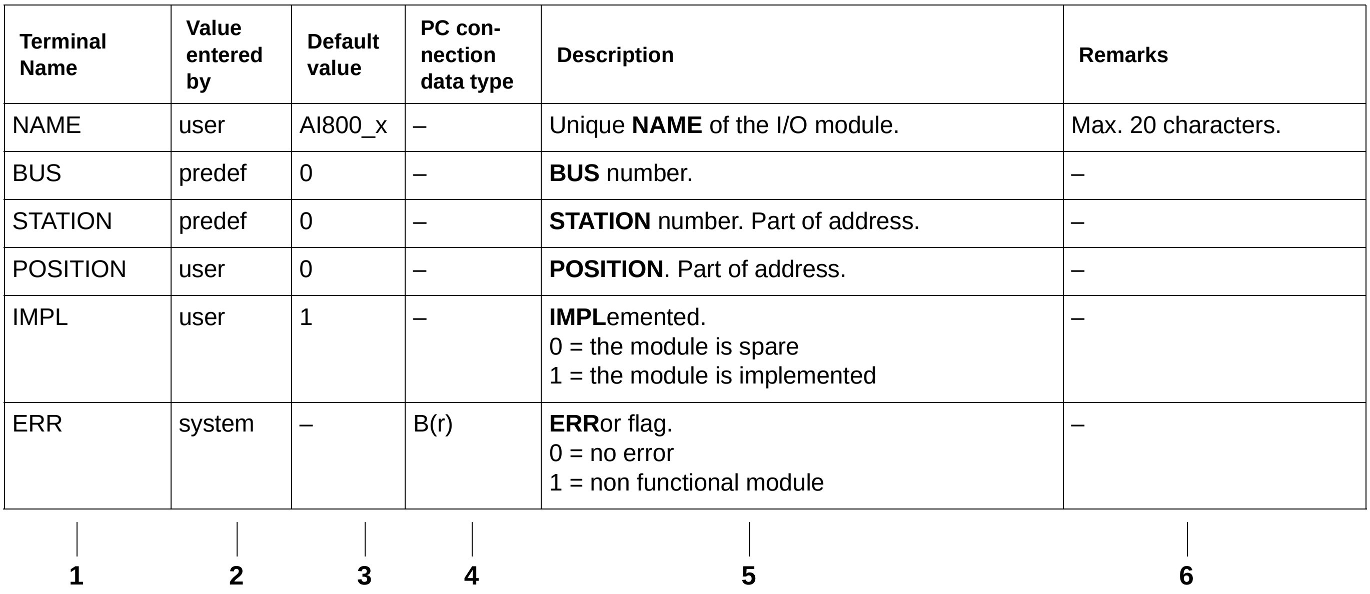
A unique identification of a module is given by the contents of the terminals BUS, STATION and POSITION. The signals on each module have running numbers beginning with 1.

In the starting phase of a project BUS, STATION and POSITION are not yet known. So each element is created with a unique item designation that is used to identify it. For some elements the item designation equals to the call name plus a consecutive number. For other elements a common type of item designations is used. Normally a group of similar elements will have the same type of item designation. For instance the data base element with item designation AIx.y corresponds to the y:th analog input signal of the x:th Analog Input module.

Terminals

The terminal table presents detailed information concerning the properties of each data base element terminal.

Terminal Description



Terminal Name	Value entered by	Default value	PC connection data type	Description	Remarks
NAME	user	AI800_x	–	Unique **NAME** of the I/O module.	Max. 20 characters.
BUS	predef	0	–	**BUS** number.	–
STATION	predef	0	–	**STATION** number. Part of address.	–
POSITION	user	0	–	**POSITION**. Part of address.	–
IMPL	user	1	–	**IMPL**emented. 0 = the module is spare 1 = the module is implemented	–
ERR	system	–	B(r)	**ERR**or flag. 0 = no error 1 = non functional module	–

Figure 5. Example of Terminals

1. **Terminal name**.
   Each available property in the element has its own terminal with a terminal name. The terminal name is unique within the element.

2. **Value entered by**.
   This column describes whether it is up to you or the system to enter values on this terminal.

   user means that a user specified value usually should be entered by Engineering Station.

   system means that the value of this terminal is updated by the system.

   predef means that the value of this terminal has been predetermined and is already present in the system. A predefined value can not be changed by the user.

   PC means that a PC element is usually connected to this terminal.

3. **Default value**.

4. **PC connection data type**.
   If a PC programs can read a data base terminal, this is indicated by ***(r)***. If it can read and write to it, this is indicated by ***(r/w)***. The data type is one of the following:

B	for Boolean
I	for Integer (16 bits)
IL	for IntegerLong (32 bits)
R	for Real

5. **Description**.
   A short description of the terminal and a list of terminal values.

6. **Remarks**.
   Short notes about restrictions, limitations, ranges, etc.

General Notes and Limitations

Name Limitations

Names of data base element instances may include most characters except space ( ). Generally the maximum length of a name is 20 characters, but some elements may have further restrictions stated in the list of terminals. If no name is specified during creation the name of a data base element instance is set according to the item designation rules, and it can be changed to a more significant one later.

NAME Terminal

All elements can be given a unique user name allowing a second identifying method.
The default user name for the element is the item designation.

BUS / STATION / POSITION Terminals

The **BUS** terminal is there for compatibility reason. It is set to zero and cannot be modified by the user.

The **STATION** terminal specifies a unique station, if the BUS contains more than one station. It is there for compatibility reason. It is set to zero and cannot be modified by the user.

The **POSITION** terminal specifies the cluster number and the position within a cluster within the station.

NOTE

On-line change of these terminals is not allowed.

Table 1. Valid Addresses in Advant Controller 70 Series

Type of data base element	BUS	STATION	POSITION
PM810	0	0	0
S800 I/O module	0	0	1, 2, …, 12, 101, …, 112, : 701, …, 712

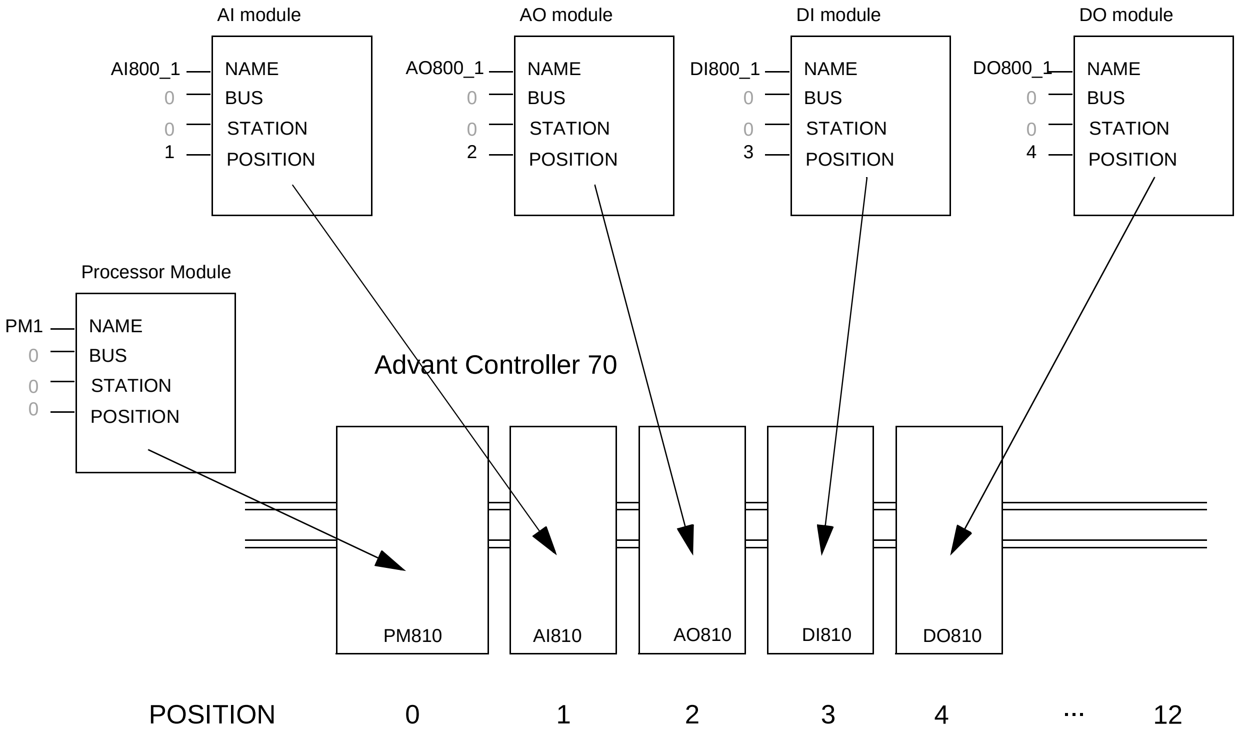


Figure 6. Example of Address Terminals Usage in Different Data Base Elements

IMPL, ACT Terminals

IMPL and ACT can be modified to determine the initialization of a module or signal after next download of configuration data.

IMPL = 0	means the module (and its signals) is spare and will not be initialized.
IMPL = 1	means the module is implemented.
ACT = 0	means the signal is spare and will not be activated after module initializing.
ACT = 1	means the signal is active.

The initialization of modules and their signals will always be done after start-up of the Advant Controller 70 system or after on-line change of the data base element. The configuration values for the I/O modules are stored on the Advant Controller 70 processor module.

DIAG Terminal of S800 I/O Modules

The following table defines the bits of terminal DIAG for S800 I/O modules.

Table 2. Description of DIAG (S800 I/O modules)

Bit	Value	Description
0	OPERATIONAL	The I/O module is operational, working okay.
1	OSP	The I/O module has detected loss of communication with the Processor module PM810 and entered the OSP (Output Set as Predetermined) state. It will automatically be taken into operation again by the system.
2	READY	The module has its parameters and will automatically be taken in operation by the system.
3	NOT CONFIGURED	The module has not its configuration parameters. The system will automatically send down the parameters and take the module into operation.
4	ERROR	The module or the system has detected a faulty module or the communication with the module is broken. *Replace the I/O module, if the module shows a red LED.*
5	INITIATION	The module is performing an initiation. The system will automatically configure the module and take it into operation.
6	MAINTENANCE	Not reported by any I/O module.
7	STATE: 7	Undefined state #7. Please report to ABB Service.
8	NO CONFIGURATION	Default value when creating the data base element. The system will automatically doweled the configuration and take the module into operation. It is also reported when the IMPL (Implemented) flag is set to 0. *Set IMPL to 1.*

Table 2. Description of DIAG (S800 I/O modules) (Continued)

Bit	Value	Description
9	OSP (FORCED) *(transient)*	The processor module PM810 has detected that it could not access the I/O module two times in a row and forced it into the OSP (Output Set as Pre-determined) state. It will automatically be taken into operation again by the system.
10	WRONG TYPE	The I/O module and the data base configuration does not comply. *Change the I/O module or replace the data base element with the appropriate type.*
11	CONFIGURING	The CI810 module reports this when performing configuration of the I/O module.
12	ERROR (FORCED)	The Communication module (e.g. CI810) has detected an error on the I/O module. *Replace the I/O module*.
13	HW MISSING	The I/O module is not inserted in its position. *Insert the I/O module*.
14	STATE: 14	Undefined state #14. Please report to ABB Service.
15	STATE: 15	Undefined state #14. Please report to ABB Service.

Creation and Modification of Data Base Elements

Creation and modification of data base elements may be done only by means of an Engineering Station (for example Advant Station 120/125 Engineering Station).

Technical Description

The technical description of the I/O modules can be found in the manual *Advant Controller 70 Technical Description*.

List of Element Types and Call Names

The following table shows the relation between element types and call names.

Table 3. List of Element Types and Call Names

Data Base Element Type	Call Name(s)
AF 100 Station	AF100S
AI Calculated	AIC
AI module	AI810, AI820, AI825
Analog Input (1)	AIS810, AIS820, AIS825
Analog Output (1)	AOS810, AOS820
AO module	AO810, AO820

Table 3. List of Element Types and Call Names (Continued)

Data Base Element Type	Call Name(s)
Boolean Data	DAT(B)
Boolean Param	PARDAT(B)
Boolean Value (1)	PARDATS(NB)
DataSet Peripheral	DSP
DI Calculated	DIC
Digital Input (1)	DIS810, DIS811, DIS814, DIS820, DIS821
DI module	DI810, DI811, DI814, DI820, DI821
Digital Output (1)	DOS810, DOS811, DOS814, DOS815, DOS820, DOS821
DO module	DO810, DO814, DO815, DO820, DO821
DP module	DP820
Drive Data Set	DRIDS
Engineered drive	DRIENG
Event Set (Send)	EVS(S)
Integer Data	DAT(I)
Integer Param	PARDAT(I)
Integer Value (1)	PARDATS(NI)
IntegerLong Data	DAT(IL)
IntegerLong Param	PARDAT(IL)
MMI Data Object	DAT_DAT
MMI Data Object AI	DAT_AI
MMI Data Object AO	DAT_AO
MMI Data Object DI	DAT_DI
MMI Data Object DO	DAT_DO
Modbus Channel	MODCHAN
Packed Bool. Param	PARDAT(NB)
Packed Int. Param	PARDAT(II), PARDAT(NI)
Packed Integer Data	DAT(II)
Processor Module	PM810
Pulse	DPS820
Real Data	DAT(R)

Table 3. List of Element Types and Call Names (Continued)

Data Base Element Type	Call Name(s)
Real Param	PARDAT(R)
RTD Input (1)	AIS830
RTD module	AI830
Standard drive	DRISTD
TC Input (1)	AIS835
TC module	AI835

(1) Element type which can not be created directly.

References between data base elements:

EVS(S)	—— *unique* ——>	AIC, DIC
DSP	—— *multiple* ——>	DAT(B), DAT(I), DAT(IL), DAT(R)
PM810	—— *unique* ——>	MODCHAN

“*multiple*” means that multiple references to one instance can be defined,
“*unique*” means that the element’s instance can be referenced only once.

Memory Requirements

The different memory requirements with respect to the connected terminals for the data base elements in Advant Controller 70 are listed in the following tables:

c = number of connections to signal terminals of the same signal element

n = number of connections to signal terminals of the same module

m = number of DAT elements referenced

p = number of connections to terminals of the same module

Table 4. Memory Requirements for Data Base Elements; Modules, Signals, Data Set

Call Name and Terminals	**Configu-ration data (bytes)**	**Common data descr. (bytes)**	**Common data (bytes)**	**Common config. address. (bytes)**	**Input con–nect. (GET) (bytes)**	**Output con–nect. (PUT) (bytes)**
AF100S	40	–	–	8	–	–
WARNING, ERR, SNA	–	–	–	–	10 + 4 × p	–
ACT to BIT32	–	–	–	–	10 + 6 × p	–
AI810	208	–	–	–	–	–
ERR, DIAG, WARNING	–	–	–	–	10 + 4 × p	–
AIS810	–	–	–	–	–	–
VALUE only	–	–	–	–	10 + 6 × n	–
ERR and VALUE	–	–	–	–	10 + 12 × n	–
AI82x	136	–	–	–	–	–
ERR, DIAG, WARNING	–	–	–	–	10 + 4 × p	–
AIS82x	–	–	–	–	–	–
VALUE only	–	–	–	–	10 + 6 × n	–
ERR and VALUE	–	–	–	–	10 + 12 × n	–
AI830	272	–	–	–	–	–
ERR, DIAG, WARNING	–	–	–	–	10 + 4 × p	–
AIS830	–	–	–	–	–	–
VALUE only	–	–	–	–	10 + 6 × n	–
ERR and VALUE	–	–	–	–	10 + 12 × n	–
VALUE>H2	–	–	–	–	10 + 4 × c	–
VALUE>H1	–	–	–	–	10 + 4 × c	–
VALUE<L1	–	–	–	–	10 + 4 × c	–
VALUE<L2	–	–	–	–	10 + 4 × c	–
AI835	290	–	–	–	–	–
ERR, DIAG, WARNING	–	–	–	–	10 + 4 × p	–

Table 4. Memory Requirements for Data Base Elements; Modules, Signals, Data Set (Continued)

Call Name and Terminals	**Configuration data (bytes)**	**Common data descr. (bytes)**	**Common data (bytes)**	**Common config. address. (bytes)**	**Input connect. (GET) (bytes)**	**Output connect. (PUT) (bytes)**
AIS835	–	–	–	–	–	–
VALUE only	–	–	–	–	10 + 6 × n	–
ERR and VALUE	–	–	–	–	10 + 12 × n	–
VALUE>H2	–	–	–	–	10 + 4 × c	–
VALUE>H1	–	–	–	–	10 + 4 × c	–
VALUE<L1	–	–	–	–	10 + 4 × c	–
VALUE<L2	–	–	–	–	10 + 4 × c	–
AO810	192	–	–	–	–	–
ERR, DIAG, WARNING	–	–	–	–	10 + 4 × p	–
AOS810	–	–	–	–	–	–
VALUE only	–	–	–	–	10 + 6 × n	10 + 6 × n
ERR and VALUE	–	–	–	–	10 + 12 × n	10 + 6 × n
AO820	128	–	–	–	–	–
ERR, DIAG, WARNING	–	–	–	–	10 + 4 × p	–
AOS820	–	–	–	–	–	–
VALUE only	–	–	–	–	10 + 6 × n	10 + 6 × n
ERR and VALUE	–	–	–	–	10 + 12 × n	10 + 6 × n
DI81x	260	–	–	–	–	–
ERR, DIAG, WARNING	–	–	–	–	10 + 4 × p	–
DIS81x	–	–	–	–	–	–
VALUE only	–	–	–	–	10 + 4 × n	–
ERR and VALUE	–	–	–	–	10 + 8 × n	–
DI82x	164	–	–	–	–	–
ERR, DIAG, WARNING	–	–	–	–	10 + 4 × p	–
DIS82x	–	–	–	–	–	–
VALUE only	–	–	–	–	10 + 4 × n	–
ERR and VALUE	–	–	–	–	10 + 8 × n	–
DO81x	260	–	–	–	–	–
ERR, DIAG, WARNING	–	–	–	–	10 + 4 × p	–
DOS81x	–	–	–	–	–	–
VALUE only	–	–	–	–	10 + 4 × n	10 + 4 × n
ERR and VALUE	–	–	–	–	10 + 8 × n	10 + 4 × n
DO82x	164	–	–	–	–	–
ERR, DIAG, WARNING	–	–	–	–	10 + 4 × p	–

Table 4. Memory Requirements for Data Base Elements; Modules, Signals, Data Set (Continued)

Call Name and Terminals	**Configu-ration data (bytes)**	**Common data descr. (bytes)**	**Common data (bytes)**	**Common config. address. (bytes)**	**Input con– nect. (GET) (bytes)**	**Output con– nect. (PUT) (bytes)**
DOS82x	–	–	–	–	–	–
VALUE only	–	–	–	–	10 + 4 × n	10 + 4 × n
ERR and VALUE	–	–	–	–	10 + 8 × n	10 + 4 × n
DP820	96	–	–	–	–	–
ERR, DIAG, WARNING	–	–	–	–	10 + 4 × p	–
DPS820	–	–	–	–	–	–
DI, UP	–	–	–	–	10 + 4 × p	–
USERLED, PCSYNC, COINCEN, DOVALUE, ACTSS, SELSP1, SELPULS1, SELSP2, SELPULS2	–	–	–	–	10 + 4 × p	10 + 4 × p
POSOF, SYNCRDY, COINC, POSSAMP, SSAMP	–	–	–	–	14	–
SYNCMODE, PSAMPCOD, SSAMPCOD	–	–	–	–	10 + 6 × p	10 + 6 × p
POSMV	–	–	–	–	16	–
COINCSP	–	–	–	–	16	16
SPEEDMV	–	–	–	–	16	–
DRIENG	194	–	–	–	–	–
ERR, DIAG, WARNING	–	–	–	–	10 + 4 × p	–
DRISTD	98	–	–	–	–	–
ERR, DIAG, WARNING	–	–	–	–	10 + 4 × p	–
DSP	8	22 + 4 x m	4	8	–	–
VALID	–	–	–	–	4	4
ERR	–	–	–	–	4	4
MODCHAN	18	–	–	–	–	–
ERR	–	–	–	–	10 + 4 × p	–
CTR_RES	–	–	–	–	10 + 4 × p	14
REQ_CTR, CRC_ERR, CHAR_ERR	–	–	–	–	10 + 4 × p	–

Table 4. Memory Requirements for Data Base Elements; Modules, Signals, Data Set (Continued)

Call Name and Terminals	**Configuration data (bytes)**	**Common data descr. (bytes)**	**Common data (bytes)**	**Common config. address. (bytes)**	**Input con– nect. (GET) (bytes)**	**Output con– nect. (PUT) (bytes)**
PM810	92	–	–	10	–	–
ERR, DIAG, WARNING	–	–	–	–	10 + 4 x p	–
ACTSCANT, ERR_BATT, LENGTH	–	–	–	–	10 + 6 x p	–
ACT to BIT32	–	–	–	–	10 + 6 x p	–

Table 5. Memory Requirements for Data Base Elements; Common Data

Call Name and Terminals	**Configuration data (bytes)**	**Common data descr. (bytes)**	**Common data (bytes)**	**Common config. address. (bytes)**	**Input con– nect. (GET) (bytes)**	**Output con– nect. (PUT) (bytes)**
DAT(B)	–	–	6	–	–	–
VALID	–	–	–	–	4	–
VALUE, VALUE2 to VALUE32	–	–	–	–	4 each	4 each
DAT(I)	–	–	4	–	–	–
VALID	–	–	–	–	4	–
VALUE	–	–	–	–	4	4
DAT(II)	–	–	6	–	–	–
VALID	–	–	–	–	4	–
VALUE, VALUE2	–	–	–	–	4 each	4 each
DAT(IL)	–	–	6	–	–	–
VALID	–	–	–	–	4	–
VALUE	–	–	–	–	4	4
DAT(R)	–	–	6	–	–	–
VALID	–	–	–	–	4	–
VALUE	–	–	–	–	4	4
PARDAT(B)	–	6	6	–	–	–
VALUE, VALUE2 to VALUE 32	–	–	–	–	4 each	4 each
PARDAT(I)	–	4	4	–	–	–
VALUE	–	–	–	–	4	4
PARDAT(II)	–	4	4	–	–	–
VALUE, VALUE2	–	–	–	–	4 each	4 each
PARDAT(IL)	–	6	6	–	–	–
VALUE	–	–	–	–	4	4
PARDAT(R)	–	6	6	–	–	–
VALUE	–	–	–	–	4	4

Table 6. Memory Requirements for Data Base Elements; Event Handling

Call Name and Terminals	**Common data descr. (bytes)**	**Common data exten–ded (bytes)**	**Additional system data (bytes)**	**Input con–nect. (GET) (bytes)**	**Output con–nect. (PUT) (bytes)**
AIC	98	44	–	–	–
ERR	–	–	–	4	4
NORM_TR	–	–	–	4	–
ERR	–	–	–	4	4
VALUE	–	–	–	4	4
EN_HI2	–	–	–	4	4
HI_LIM2	–	–	–	4	4
EN_HI1	–	–	–	4	4
HI_LIM1	–	–	–	4	4
EN_LO1	–	–	–	4	4
LO_LIM1	–	–	–	4	4
EN_LO2	–	–	–	4	4
LO_LIM2	–	–	–	4	4
HYST	–	–	–	4	4
DIC	34	16	–	–	–
NORM_TR	–	–	–	4	4
ERR	–	–	–	4	–
VALUE	–	–	–	4	4
EVS(S)	40	18	3328/9728 (1)	–	–
CLEAR_Q	–	–	–	4	4
Q_EMPTY	–	–	–	4	–
WARNING	–	–	–	4	–
ERR	–	–	–	4	–

(1) QUEUE=NORMAL/QUEUE=EXTENDED

Execution Times of GET and PUT Elements

The following execution time table is valid for connections from PC element terminals to the specified data base element terminal. The resulting execution time has to be added to the runtime of the control module.

If, for a module, no ERR terminal of a signal is accessed from a control module, use the formula given at VALUE only of the signal.

If, for a module, at least one ERR of a signal is accessed from a control module, use the formula given at ERR, VALUE of the signal.

c = number of connections to signal terminals of the same signal element

n = number of connections to signal terminals of the same module

m = number of DAT elements referenced

p = number of connections to terminals of the same module

Table 7. Execution Times for Data Base Elements; Modules, Signals, Data Set

Call Name and Terminals	Connection to a PC element	
	Input terminal GET element (μs)	**Output terminal PUT element (μs)**
AF100S WARNING, ERR, SNA ACT to BIT32	– 96 + 13 × p 102 + 19 × p	– – –
AI810 ERR, DIAG, WARNING	– 14 + 10 × p	– –
AIS810 VALUE only ERR and VALUE	– 20 + 10 × n 12 + 18 × n	– – –
AI82x ERR, DIAG, WARNING	– 14 + 10 × p	– –
AIS82x VALUE only ERR and VALUE	– 20 + 10 × n 12 + 18 × n	– – –
AI830 ERR, DIAG, WARNING	– 14 + 10 × p	– –
AIS830 VALUE only ERR and VALUE VALUE>H2 VALUE>H1 VALUE<L1 VALUE<L2	– 20 + 10 × n 12 + 18 × n 13 + 7 × c 13 + 7 × c 13 + 7 × c 13 + 7 × c	– – – – – – –

Table 7. Execution Times for Data Base Elements; Modules, Signals, Data Set (Continued)

Call Name and Terminals	**Connection to a PC element**	
	Input terminal GET element (µs)	**Output terminal PUT element (µs)**
AI835 ERR, DIAG, WARNING	– 14 + 10 × p	– –
AIS835 VALUE only ERR and VALUE VALUE>H2 VALUE>H1 VALUE<L1 VALUE<L2	– 20 + 10 × n 12 + 18 × n 13 + 7 × c 13 + 7 × c 13 + 7 × c 13 + 7 × c	– – – – – – –
AO810 ERR, DIAG, WARNING	– 14 + 10 × p	– –
AOS810 VALUE only ERR and VALUE	– 20 + 10 × n 12 + 18 × n	– 8 + 9 × n 8 + 9 × n
AO820 ERR, DIAG, WARNING	– 14 + 10 × p	– –
AOS820 VALUE only ERR and VALUE	– 20 + 10 × n 12 + 18 × n	– 8 + 9 × n 8 + 9 × n
DI81x ERR, DIAG, WARNING	– 14 + 10 × p	– –
DIS81x VALUE only ERR and VALUE	– 16.5 + 8.5 × n 17 + 11.2 × n	– – –
DI82x ERR, DIAG, WARNING	– 14 + 10 × p	– –
DIS82x VALUE only ERR and VALUE	– 16.5 + 8.5 × n 17 + 11.2 × n	– – –
DO81x ERR, DIAG, WARNING	– 14 + 10 × p	– –
DOS81x VALUE only ERR and VALUE	– 16.5 + 8.5 × n 17 + 11.2 × n	– 19 + 6.2 × n 19 + 6.2 × n
DO82x ERR, DIAG, WARNING	– 14 + 10 × p	– –
DOS82x VALUE only ERR and VALUE	– 16.5 + 8.5 × n 17 + 11.2 × n	– 19 + 6.2 × n 19 + 6.2 × n

Table 7. Execution Times for Data Base Elements; Modules, Signals, Data Set (Continued)

Call Name and Terminals	**Connection to a PC element**	
	Input terminal GET element (µs)	**Output terminal PUT element (µs)**
DP820		
ERR, DIAG, WARNING	14 + 10 × p	–
DPS820		
DI, UP	16.5 + 8.5 × p	–
USERLED,		
PCSYNC,		
COINCEN,		
DOVALUE,		
ACTSS,		
SELSP1,		
SELPULS1,		
SELSP2,		
SELPULS2	16.5 + 8.5 × p	18 + 9 × p
POSOF,		
SYNCRDY,		
COINC,		
POSSAMP,		
SSAMP	40	–
SYNCMODE,		
PSAMPCOD,		
SSAMPCOD	14 + 10 × p	14 + 10 × p
POSMV,		
COINCSP,		
SPEEDMV	24	24
DSP		
VALID	10 + 7.2 × n	–
ERR	10 + 7.2 × n	–
MODCHAN		
ERR	42 + 9 × p	–
CTR_RES	51	17 + 9 × p
REQ_CTR, CRC_ERR, CHAR_ERR	42 + 9 × p	–
PM810		
ERR, DIAG, WARNING	14 + 10 × p	–
ACTSCANT	24	–
ERR_BATT	24	–
LENGTH	24	–
ACT to BIT32	102 + 19 × p	–

Table 8. Execution Times for Data Base Elements; Common Data

Name	Connection to a PC element	
	Input terminal GET element (µs)	**Output terminal PUT element (µs)**
DAT(B) VALID VALUE, VALUE2 to VALUE32	15 7.2 7 × n	27 7.2 6.2 × n
DAT(I) VALID VALUE	– 7.2 7.2	– 7.2 7.2
DAT(II) VALID VALUE, VALUE2	– 7.2 8 each	– 7.2 8 each
DAT(IL) VALID VALUE	– 7.2 8	– 7.2 8
DAT(R) VALID VALUE	– 7.2 8	– 7.2 8
PARDAT(B) VALUE, VALUE2 to VALUE3	15 7 × n	27 6.2 × n
PARDAT(I) VALUE	– 7.2	– 7.2
PARDAT(II) VALUE, VALUE2	– 7.2 each	– 7.2 each
PARDAT(IL) VALUE	– 8	– 8
PARDAT(R) VALUE	– 8	– 8

Table 9. Execution Times for Data Base Elements; Event Handling

Name	**Connection to a PC element**	
	Input terminal GET element (µs)	**Output terminal PUT element (µs)**
AIC	–	–
NORM_TR	7.2	7.2
ERR	7.2	–
VALUE	8	8
EN_HI2	7.2	7.2
HI_LIM2	8	8
EN_HI1	7.2	7.2
HI_LIM1	8	8
EN_LO1	7.2	7.2
LO_LIM1	8	8
EN_LO2	7.2	7.2
LO_LIM2	8	8
HYST	8	8
DIC	–	–
NORM_TR	7.2	7.2
VALUE	7.2	–
ERR	7.2	7.2
EVS(S)	–	–
CLEAR_Q	7.2	7.2
Q_EMPTY	7.2	–
WARNING	7.2	–
ERR	7.2	–

Execution Time of Event Detection

The data base elements AI Calculated (AIC) and DI Calculated (DIC) are used for event detection by connecting a PC signal to their VALUE terminals.

There is a system function assigned to each of the above data base elements that executes event detection. The execution times are listed in the following table:

Table 10. Execution of Event Detection Functions

Call Name	**Execution Time (µs)**
AIC	3 200
DIC	1 000

Data Base Elements Listed in Functional Groups

MODULES AND SIGNALS

Processor Modules

PM810 .... *Processor Module* 105

Process I/O

AI810, AI82x .... *AI module* 30
AI830 .... *RTD module* 32
AI835 .... *TC module* 34
AIS810, AIS82x .... *Analog Input* 36
AIS830 .... *RTD Input* 38
AIS835 .... *TC Input* 41
AO810, AO820 .... *AO module* 44
AOS810, AOS820 .... *Analog Output* 46
DI81x, DI82x .... *DI module* 63
DIS81x, DIS82x .... *Digital Input* 67
DO81x, DO82x .... *DO module* 68
DOS81x, DOS82x .... *Digital Output* 70
DP820 .... *DP module* 71
DPS820 .... *Pulse* 73

Backplane I/O bus extension

DSP .... *DataSet Peripheral* 87

Advant Fieldbus 100

AF100S .... *AF 100 Station* 23

Modbus

MODCHAN .... *Modbus Channel* 94

Event Handling

Event

AIC .... *AI Calculated* 27
DIC .... *DI Calculated* 65

Event Set

EVS(S) .... *Event Set (Send)* 90

Data Base Elements Listed in Functional Groups (Continued)

COMMON DATA

DAT(B) .... *Boolean Data* 47
DAT(I) .... *Integer Data* 50
DAT(II) .... *Packed Integer Data* 51
DAT(IL) .... *IntegerLong Data* 52
DAT(R) .... *Real Data* 53
PARDAT(B) .... *Boolean Param* 94
PARDAT(I) .... *Integer Param* 97
PARDAT(II) .... *Packed Int. Param* 98
PARDAT(IL) .... *IntegerLong Param* 99
PARDAT(NB) .... *Packed Bool. Param* 100
PARDAT(NI) .... *Packed Int. Param* 101
PARDAT(R) .... *Real Param* 102
PARDATS(NB) .... *Boolean Param* 103
PARDATS(NI) .... *Integer Param* 104

Drives

DRIDS .... *Drive Data Set* 80
DRIENG .... *Engineered drive* 81
DRISTD .... *Standard drive* 84

MMI

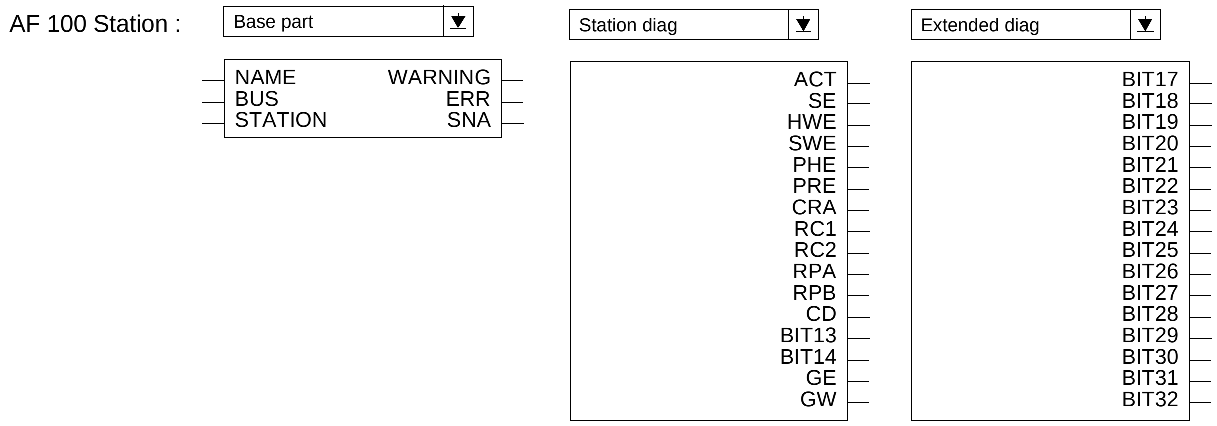
DAT_AI .... MMI Data Object AI 54
DAT_AO .... MMI Data Object AO 56
DAT_DI .... MMI Data Object DI 59
DAT_DO .... MMI Data Object DO 61
DAT_DAT .... MMI Data Object 58

AF 100 Station **AF100S**

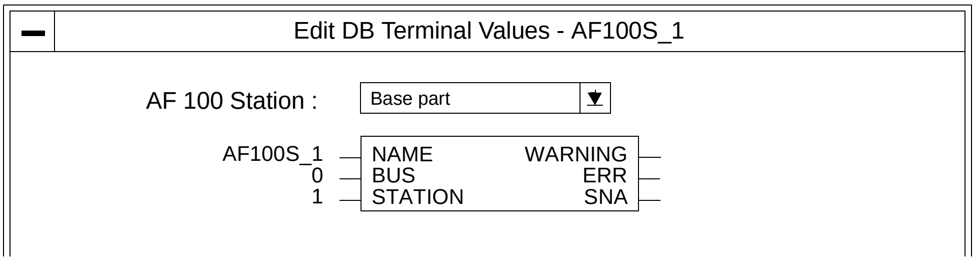
Summary

The AF 100 Station data base element specifies a general type of station. It must support services to report diagnostic information in the same way as an Advant Controller 70.

Overview



Base part



AF100S_1 NAME
0 BUS
1 STATION

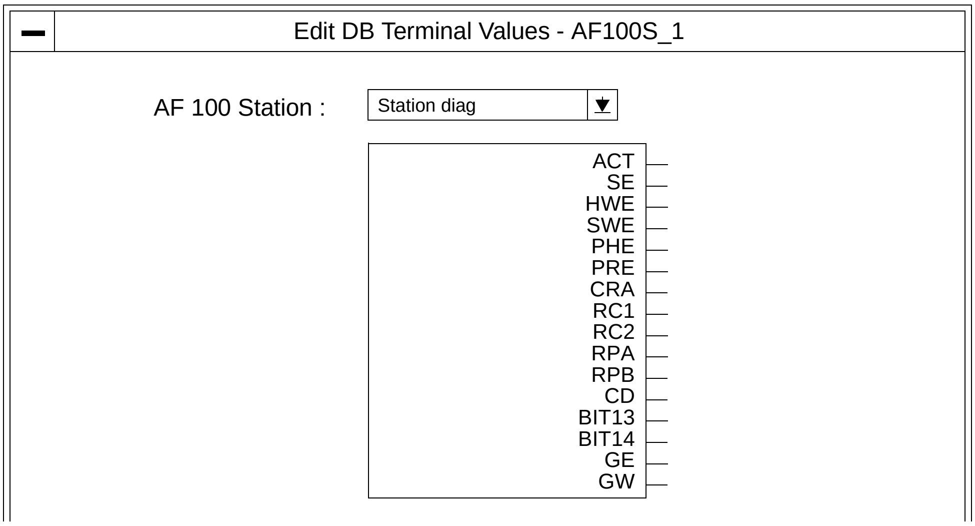
Terminal Description, Base part

Terminal Name	Value entered by	Default value	PC connection data type	Description	Remarks
NAME	user	AF100S_x	–	Unique **NAME**.	Max. 20 characters.
BUS	user	0	–	**BUS** number of AF 100 station.	See section “Address terminals” in the Introduction.
STATION	user	1	–	**STATION** number of AF 100 station.	

Terminal Description, Base part (Continued)

Terminal Name	Value entered by	Default value	PC connection data type	Description	Remarks
WARNING	system	–	B(r)	**WARNING** indicates a non-fatal error. WARNING is set if ACT = FALSE or one of the following is TRUE: GW, PHE, RC1, RC2, RPA, RPB, PRE.	–
ERR	system	–	B(r)	**ERR**or indicates fatal errors, such as configuration errors or hardware errors. ERR is set if one of the following is TRUE: SNA, GE, SE, SWE, HWE.	–
SNA	system	–	B(r)	**S**tation **N**ot **A**vailable.	Data is not updated.

Station diag



Edit DB Terminal Values - AF100S_1

AF 100 Station : Station diag

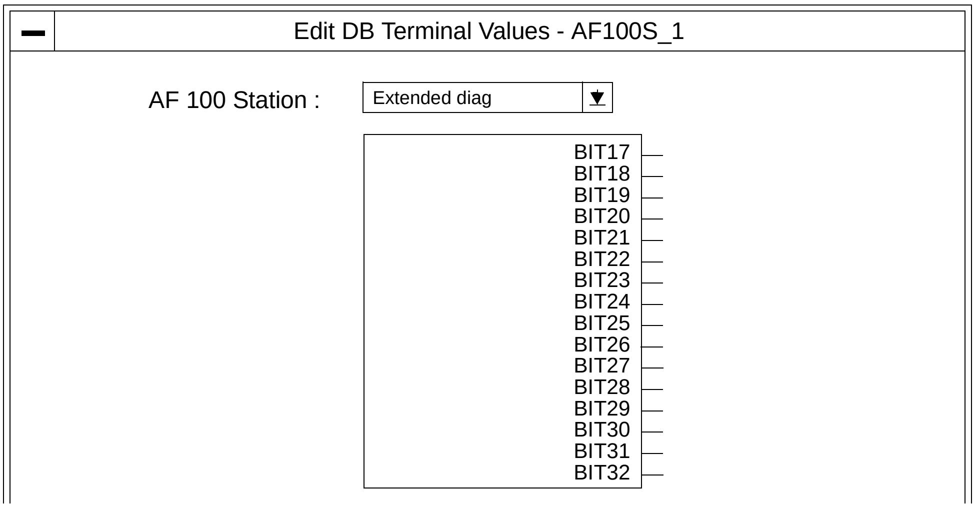
Terminal Description, Station diag

Terminal Name	Value entered by	Default value	PC connection data type	Description	Remarks
ACT	system	–	B(r)	Station is **ACT**ive in normal operation mode.	–
SE	system	–	B(r)	**S**evere **E**rror.	Check connected station.
HWE	system	–	B(r)	**H**ard**W**are **E**rror.	Non-fatal error in the connected station.
SWE	system	–	B(r)	**S**oft**W**are **E**rror.	Check application program in the connected station.

Terminal Description, Station diag (Continued)

Terminal Name	Value entered by	Default value	PC connection data type	Description	Remarks
PHE	system	–	B(r)	**P**eripheral **H**ardware **E**rror.	Check hardware in connected station.
PRE	system	–	B(r)	**PR**ocess **E**rror.	Possible I/O hardware or input signal error in the connected station.
CRA	system	–	B(r)	**C**able **R**edundancy **A**vailable.	Station is configured to have redundant media.
RC1	system	–	B(r)	**R**edundant **C**able **1** is bad.	Replace media (cable 1).
RC2	system	–	B(r)	**R**edundant **C**able **2** is bad.	Replace media (cable 2).
RPA	system	–	B(r)	**R**edundant **P**ower **A** failure.	Check power supply unit A.
RPB	system	–	B(r)	**R**edundant **P**ower **B** failure.	Check power supply unit B.
CD	system	–	B(r)	**C**hanged **D**iagnostics.	–
BIT13	system	–	B(r)	**BIT** number **13** of station diagnostics.	Reserved for future use.
BIT14	system	–	B(r)	**BIT** number **14** of station diagnostics.	Reserved for future use.
GE	system	–	B(r)	**G**eneral station **E**rror.	Check connected station.
GW	system	–	B(r)	**G**eneral **W**arning.	Check connected station.

Extended diag



Terminal Description, Extended diag

Terminal Name	Value entered by	Default value	PC connection data type	Description	Remarks
BIT17	system	–	B(r/w)	**BIT** number **17** of extended station diagnostics.	Reserved for future use.
: : BIT32	system	–	B(r/w)	**BIT** number **32** of extended station diagnostics.	Reserved for future use.

AI Calculated AIC

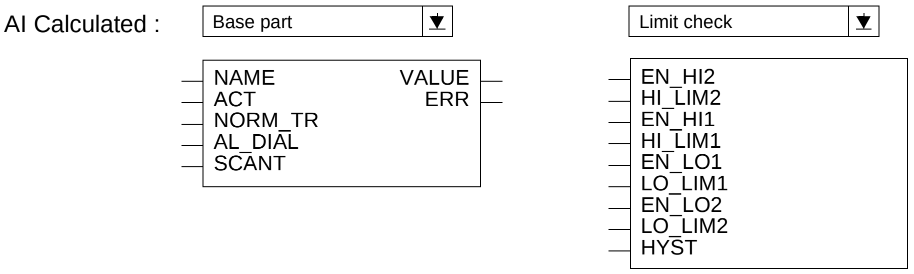
Summary

The AI Calculated element represents an event channel used for detection of calculated analog events.

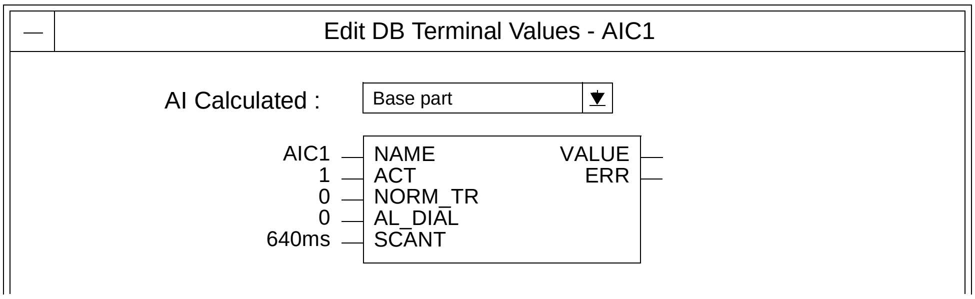
An event is detected when the real value (terminal VALUE) exceeds one of the two high or low limits or moves back into the range.

The hysteresis parameter (terminal HYST) can be used to suppress event generation if the value is fluctuating around a limit.

Overview



Base part



AIC1 — NAME
1 — ACT
0 — NORM_TR
0 — AL_DIAL
640ms — SCANT

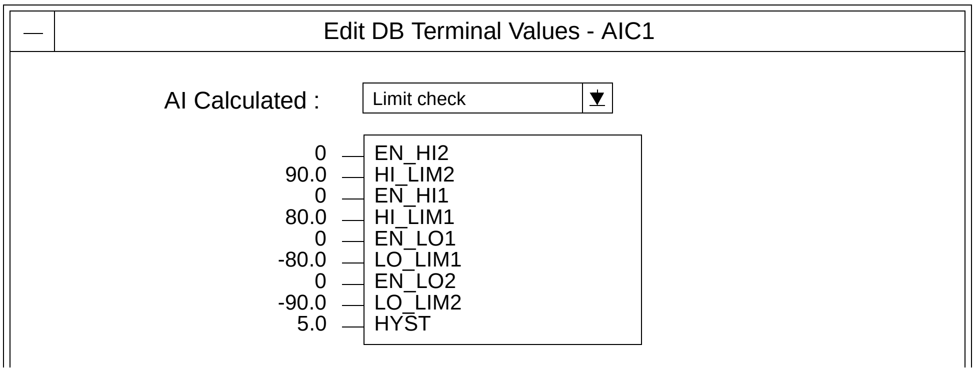
Terminal Description, Base part

Terminal Name	Value entered by	Default value	PC connection data type	Description	Remarks
NAME	user	AICx	–	Unique **NAME** of the event channel.	Max. 20 characters.
ACT	user	1	–	Element is: 0 = not **ACT**ive 1 = **ACT**ive	Element must be referenced by an EVS(S) when ACT = 1.

Terminal Description, Base part (Continued)

Terminal Name	**Value entered by**	**Default value**	**PC connection data type**	**Description**	**Remarks**
NORM_TR	user/PC	0	B(r/w)	**NORM**al **TR**eatment. 0 = event detection disabled 1 = event detection enabled	Not allowed to change on-line.
AL_DIAL	user	0	–	**DIAL** the master on **AL**arm. 0 = no dial on alarm 1 = dial on alarm	RCOM only.
SCANT	user	640ms	–	**SCAN T**ime for event recording. Values: 10ms, 20ms, 40ms, 80ms, 160ms, 320ms, 640ms, 1280ms, 2560ms, 5120ms, 10240ms, 20480ms, 40960ms, 81920ms, 163840ms, 327680ms	–
ERR	system	–	B(r)	**ERR**or flag indicating fatal errors.	–
VALUE	PC	0	R(r/w)	Signal **VALUE** (is watched for events).	–

Limit check



Edit DB Terminal Values - AIC1

AI Calculated : Limit check

0 — EN_HI2
90.0 — HI_LIM2
0 — EN_HI1
80.0 — HI_LIM1
0 — EN_LO1
-80.0 — LO_LIM1
0 — EN_LO2
-90.0 — LO_LIM2
5.0 — HYST

Terminal Description, Limit check

Terminal Name	**Value entered by**	**Default value**	**PC connection data type**	**Description**	**Remarks**
EN_HI2	user/PC	0	B(r/w)	**EN**ables **HI**gh limit no. **2** for event generation. 0 = disable 1 = enable	Not allowed to change on-line.

Terminal Description, Limit check (Continued)

Terminal Name	**Value entered by**	**Default value**	**PC connection data type**	**Description**	**Remarks**
HI_LIM2	user/PC	90.0	R(r/w)	**HI**gh **LIM**it no. **2** for event generation of VALUE.	Not allowed to change on-line. HI_LIM2 > HI_LIM1 > LO_LIM1 > LO_LIM2 required if at least one value is not zero. Moreover the difference of two neighboring limits must be greater hysteresis.
EN_HI1	user/PC	0	B(r/w)	**EN**ables **HI**gh limit no. **1** for event generation. 0 = disable 1 = enable	Not allowed to change on-line.
HI_LIM1	user/PC	80.0	R(r/w)	**HI**gh **LIM**it no. **1** for event generation of VALUE.	Not allowed to change on-line. HI_LIM2 > HI_LIM1 > LO_LIM1 > LO_LIM2 required if at least one value is not zero. Moreover the difference of two neighboring limits must be greater hysteresis.
EN_LO1	user/PC	0	B(r/w)	**EN**ables **LO**w limit no. **1** for event generation. 0 = disable 1 = enable	Not allowed to change on-line.
LO_LIM1	user/PC	–80.0	R(r/w)	**LO**w **LIM**it no. **1** for event generation of VALUE.	Not allowed to change on-line. HI_LIM2 > HI_LIM1 > LO_LIM1 > LO_LIM2 required if at least one value is not zero. Moreover the difference of two neighboring limits must be greater hysteresis.
EN_LO2	user/PC	0	B(r/w)	**EN**ables **LO**w limit no. **2** for event generation. 0 = disable 1 = enable	Not allowed to change on-line.
LO_LIM2	user/PC	–90.0	R(r/w)	**LO**w **LIM**it no. **2** for event generation of VALUE.	Not allowed to change on-line. HI_LIM2 > HI_LIM1 > LO_LIM1 > LO_LIM2 required if at least one value is not zero. Moreover the difference of two neighboring limits must be greater hysteresis.
HYST	user/PC	5.0	R(r/w)	**HYST**eresis for limit check.	≥0.0 Not allowed to change on-line.

AI module AI810, AI82x

Summary

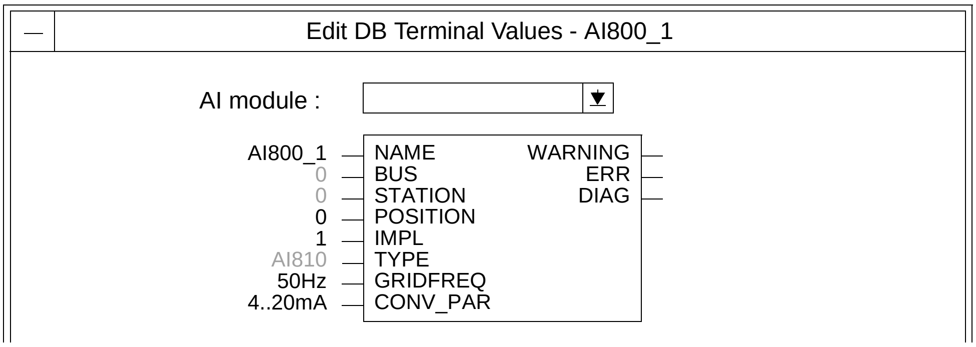
The AI module data base element specifies an Analog Input hardware module of the following type:

- AI810, 1×8 channel, voltage and current, single ended, rated isolation 50 V
- AI820, 4×1 channel, differential, bipolar voltage and current, rated isolation 50 V
- AI825, 4×1 channel, individual galvanic isolation

The data base element is superior to the signal elements associated to the analog input channels in the module and contains diagnostic information of the I/O module.

The Engineering Station will create:

- 1 data base element of type AI module
- 8 (AI810) or 4 (AI820, AI825) data base elements of type Analog Input.



Edit DB Terminal Values - AI800_1

AI module :

AI800_1 — NAME
0 — BUS
0 — STATION
0 — POSITION
1 — IMPL
AI810 — TYPE
50Hz — GRIDFREQ
4..20mA — CONV_PAR
WARNING —
ERR —
DIAG —

Terminal Description

Terminal Name	Value entered by	Default value	PC connection data type	Description	Remarks
NAME	user	AI800_x	–	Unique **NAME** of the I/O module.	Max. 20 characters.
BUS	predef	0	–	**BUS** number. Part of address.	–
STATION	predef	0	–	**STATION** number. Part of address.	–
POSITION	user	0	–	**POSITION**. Part of address.	–
IMPL	user	1	B(r)	**IMPL**emented. 0 = the module is spare 1 = the module is implemented	–

Terminal Description (Continued)

Terminal Name	**Value entered by**	**Default value**	**PC connection data type**	**Description**	**Remarks**
TYPE	predef	AI810/ AI820/ AI825	–	Module **TYPE** designation.	–
GRIDFREQ	user	50Hz	–	**GRIDFREQ**uency**.** Values: 16 2/3Hz, 50Hz, 60Hz	–
CONV_PAR	user	4..20mA	–	**CONV**ersion **PAR**ameter. Default value for the I/O signal elements.	See table “Conversion parameters”
WARNING	system	–	B(r)	**WARNING** indicates a non-fatal error.	–
ERR	system	–	B(r)	**ERR**or indicates fatal errors, such as configuration errors or hardware errors.	–
DIAG	system	–	I(r)	**DIAG**nostics.	See the Section DIAG Terminal of S800 I/O Modules in Chapter Introduction.

About Lower Limit (,LL)

The raw signal (not signal conditioned) value is always limited to the lowest value given by the signal range. This means that if the raw signal value is below this limit it will be set to the low limit value, before performing the signal conditioning.

Conversion Parameters

Module type	**CONVPAR values**					
AI810	0..20mA	0..10V	4..20mA,LL	2..10V	0..20mA,LL	0..10V,LL
	4..20mA,LL	2..10V, LL				
AI820	0..20mA	-20mA..20mA	0..10V	-10..10V	0..5V	-5..5V
	4..20mA	2..10V	1..5V	0..20mA,LL	-20..20mA,LL	0..10V,LL
	-10..10V,LL	0..5V,LL	-5..5V,LL	4..20mA,LL	2..10V,LL	1..5V,LL
AI825	0..20mA	-20mA..20mA	0..10V	-10..10V	0..5V	-5..5V
	4..20mA	2..10V	1..5V	0..20mA,LL	-20..20mA,LL	0..10V,LL
	-10..10V,LL	0..5V,LL	-5..5V,LL	4..20mA,LL	2..10V,LL	1..5V,LL

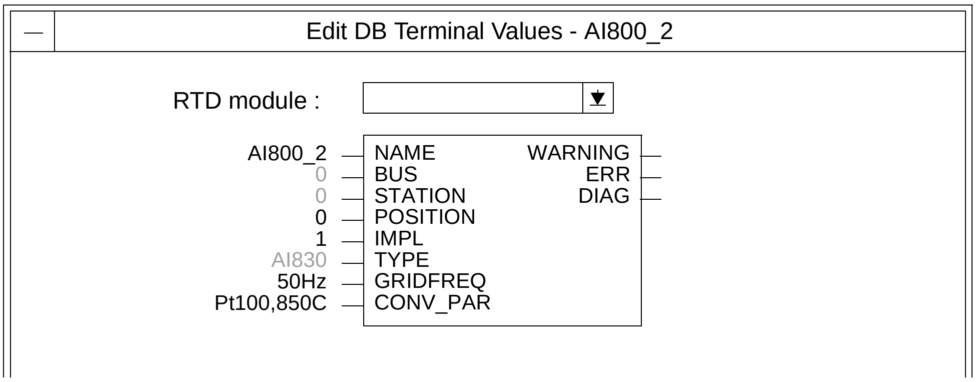
RTD module AI830

Summary

The RTD module data base element specifies an Analog Input RTD hardware module of type AI830. The data base element is superior to the signal elements associated to the RTD input channels in the module and contains diagnostic information of the I/O module.

The Engineering Station will create:

- 1 data base element of type RTD module
- 8 data base elements of type RTD Input.



AI800_2
0
0
0
1
AI830
50Hz
Pt100,850C

Terminal Description

Terminal Name	Value entered by	Default value	PC connection data type	Description	Remarks
NAME	user	AI800_x	–	Unique **NAME** of the I/O module.	Max. 20 characters.
BUS	predef	0	–	**BUS** number. Part of address.	–
STATION	predef	0	–	**STATION** number. Part of address.	–
POSITION	user	0	–	**POSITION**. Part of address.	–
IMPL	user	1	B(r)	**IMPL**emented. 0 = the module is spare 1 = the module is implemented	–
TYPE	predef	AI830	–	Module **TYPE** designation.	–
GRIDFREQ	user	50Hz	–	**GRIDFREQ**uency**.** Values: 50Hz, 60Hz	–

Terminal Description (Continued)

Terminal Name	Value entered by	Default value	PC connection data type	Description	Remarks
CONV_PAR	user	Pt100, 850C	–	**CONV**ersion **PAR**ameter. Default value for the I/O signal elements: See the table "Conversion Parameters" below.	Modification denied after creation.
WARNING	system	–	B(r)	**WARNING** indicates a non-fatal error.	–
ERR	system	–	B(r)	**ERR**or indicates fatal errors, such as configuration errors or hardware errors.	–
DIAG	system	–	I(r)	**DIAG**nostics.	See the table "DIAG (I/O modules)" in Introduction

Conversion Parameters

Value (1)	Range	Value (1)	Range
Pt100,80C	-80 … 80 °C	Pt100,176F	-112 … 176 °F
Pt100,250C	-112 … 250 °C	Pt100,482F	-328 … 482 °F
Pt100,850C	-200 … 850 °C	Pt100,1562F	-328 … 1562 °F
Ni100,180C	-60 … 180 °C	Ni100,356F	-76 … 356 °F
Ni120,260C	-80 … 260 °C	Ni120,500F	-112 … 500 °F
Cu10,260C	-100 … 260 °C	Cu10,500F	-142 … 500 °F
Resistor,400	0 … 400 Ω		

(1) All values include a comma

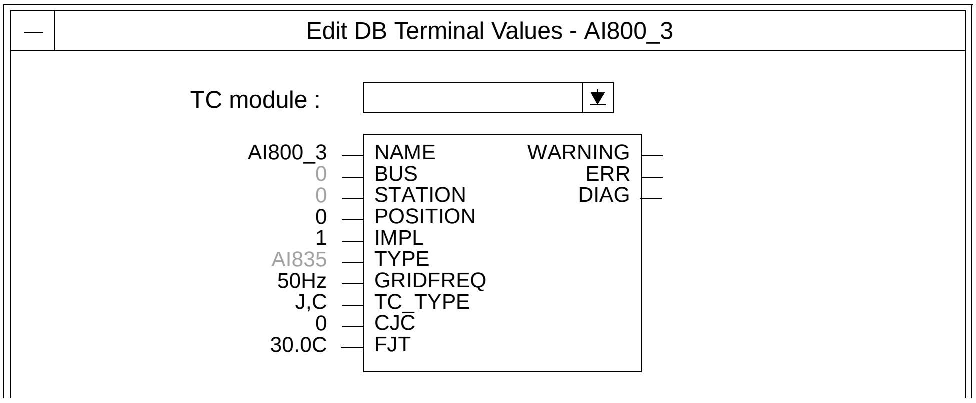
TC module AI835

Summary

The TC module data base element specifies an Analog Input TC hardware module of type AI835. The data base element is superior to the signal elements associated to the TC input channels in the module and contains diagnostic information of the I/O module.

The Engineering Station will create:

- 1 data base element of type TC module
- 8 data base elements of type TC Input.



Edit DB Terminal Values - AI800_3

TC module :

AI800_3 — NAME
0 — BUS
0 — STATION
0 — POSITION
1 — IMPL
AI835 — TYPE
50Hz — GRIDFREQ
J,C — TC_TYPE
0 — CJC
30.0C — FJT

WARNING —
ERR —
DIAG —

Terminal Description

Terminal Name	Value entered by	Default value	PC connection data type	Description	Remarks
NAME	user	AI800_x	–	Unique **NAME** of the I/O module.	Max. 20 characters.
BUS	predef	0	–	**BUS** number. Part of address.	–
STATION	predef	0	–	**STATION** number. Part of address.	–
POSITION	user	0	–	**POSITION**. Part of address.	–
IMPL	user	1	B(r)	**IMPL**emented. 0 = the module is spare 1 = the module is implemented	–
TYPE	predef	AI835	–	Module **TYPE** designation.	–

Terminal Description (Continued)

Terminal Name	Value entered by	Default value	PC connection data type	Description	Remarks
GRIDFREQ	user	50Hz	–	**GRIDFREQ**uency. Values: 50Hz, 60Hz	–
TC_TYPE	user	J,C	–	**T**hermo**C**ouple **TYPE**. Default value for the I/O signal elements. Values: See the table “TC-Types” below.	Both for Celsius and Fahrenheit. Modification denied after creation.
CJC	user	0	–	**C**old **J**unction **C**ompensation. Values: 0 = Cold Junction Compensation 1 = Fixed Junction Compensation	Modification denied after creation.
FJT	user	30.0C	–	**F**ixed **J**unction **T**emperature. Values: -40.0C to 100.0C or -40.0F to 212.0F	–
WARNING	system	–	B(r)	**WARNING** indicates a non-fatal error.	–
ERR	system	–	B(r)	**ERR**or indicates fatal errors, such as configuration errors or hardware errors.	–
DIAG	system	–	I(r)	**DIAG**nostics.	See the table “DIAG (I/O modules)” in Introduction

TC-Types

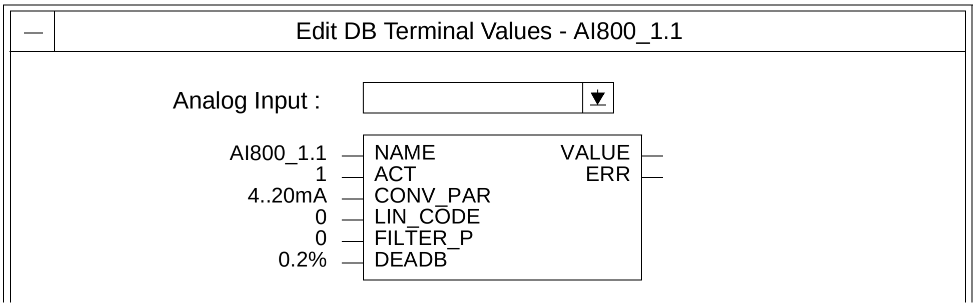
Value (1)	Range	Value (1)	Range
B,C	0 … 1820 °C	B,F	32 … 3308 °F
C,C	0 … 2300 °C	C,F	32 … 4172 °F
E,C	-270 … 1000 °C	E,F	-454 … 1832 °F
J,C	-210 … 1200 °C	J,F	-346 … 2192 °F
K,C	-270 … 1372 °C	K,F	-454 … 2501.6 °F
N,C	-270 … 1300 °C	N,F	-454 … 2372 °F
R,C	-50 … 1769 °C	R,F	-58 … 3216.2 °F
S,C	-50 … 1769 °C	S,F	-60 … 3216.2 °F
T,C	-270 … 400 °C	T,F	-454 … 752 °F
Pt100,C	-40 … 100 °C	Pt100,F	-40 … 212 °F
Linear	-75 … 75 mV		

(1) All values include a comma

Analog Input AIS810, AIS82x

Summary

The data base element Analog Input is subordinate to the AI module data base element specifying an AI810 or AI82x hardware module.



Edit DB Terminal Values - AI800_1.1

Analog Input :

AI800_1.1 — NAME VALUE —
1 — ACT ERR —
4..20mA — CONV_PAR
0 — LIN_CODE
0 — FILTER_P
0.2% — DEADB

Terminal Description

Terminal Name	**Value entered by**	**Default value**	**PC connection data type**	**Description**	**Remarks**
NAME	user	AI800_ x.y	–	Unique **NAME** of the I/O signal.	Max. 20 characters.
ACT	user	1	–	Channel is: 0 = spare 1 = **ACT**ive	–
CONV_PAR	user	4..20mA	–	**CONV**ersion **PAR**ameter.	Value inherited from module element. See table “Conversion parameter” there.
LIN_CODE	user	0	–	**LIN**earization **CODE**. Values: 0 = no linearization 1 = square root	–
FILTER_P	user	0	–	**FILTER P**arameter. Values: 0 = no filtering 0ms…9500ms or 10s…65s	–
DEADB	user	0.2%	–	**DEADB**and. Values: -1 = update every time 0%, 0.004%, 0.01%, 0.02%, 0.05%, 0.1%, 0.2%, 0.4%, 0.9%, 1.8%, 3.6%	–

Terminal Description (Continued)

Terminal Name	**Value entered by**	**Default value**	**PC con-nection data type**	**Description**	**Remarks**
VALUE	system	–	R(r)	Signal **VALUE**.	
ERR	system	–	B(r)	**ERR**or indicates fatal errors, such as configuration errors or hardware errors.	–

About Lower Limit (,LL)

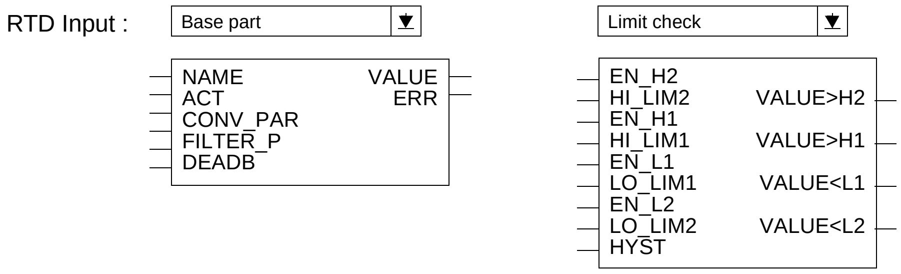
The raw signal (not signal conditioned) value is always limited to the lowest value given by the signal range. This means that if the raw signal value is below this limit it will be set to the low limit value, before performing the signal conditioning.

RTD Input AIS830

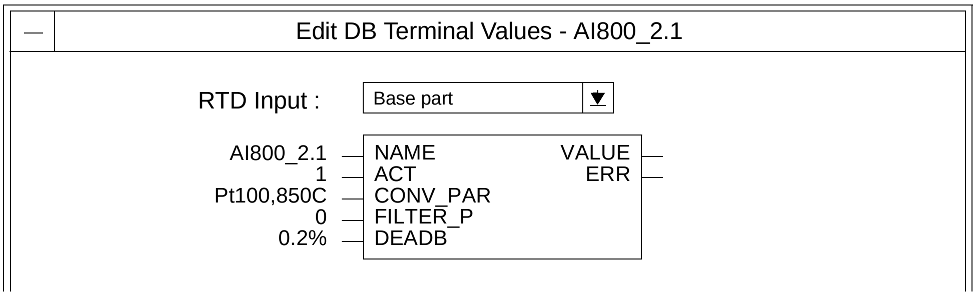
Summary

The data base element RTD Input is subordinate to the RTD module data base element specifying an AI830 hardware module.

Overview



Base part


Edit DB Terminal Values - AI800_2.1

RTD Input : Base part

AI800_2.1 — NAME VALUE
1 — ACT ERR
Pt100,850C — CONV_PAR
0 — FILTER_P
0.2% — DEADB

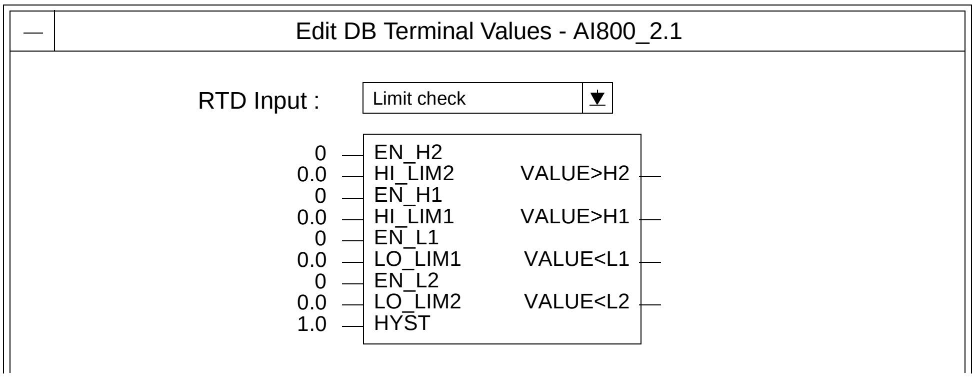
Terminal Description, Base part

Terminal Name	**Value entered by**	**Default value**	**PC connection data type**	**Description**	**Remarks**
NAME	user	AI800_ x.y	–	Unique **NAME** of the I/O signal.	Max. 20 characters.
ACT	user	1	–	Channel is: 0 = spare 1 = **ACT**ive	–
CONV_PAR	user	–	–	**CONV**ersion **PAR**ameter. Values: See the table “Conversion Parameters” in the description of the module element.	Value inherited from module element.

Terminal Description, Base part (Continued)

Terminal Name	Value entered by	Default value	PC connection data type	Description	Remarks
FILTER_P	user	0	–	**FILTER P**arameter. Values: 0 = no filtering 0ms…9500ms, 10s…95s, 100s…650s	–
DEADB	user	0.2%	–	**DEADB**and. Values: -1 = update every time 0%, 0.003%, 0.009%, 0.02%, 0.05%, 0.1%, 0.2%, 0.4%, 0.8%, 1.6%, 3.2%	–
VALUE	system	–	R(r)	Signal **VALUE** in °C, °F, or Ω depending on conversion parameter.	–
ERR	system	–	B(r)	**ERR**or indicates fatal errors, such as configuration errors or hardware errors.	–

Limit check



Edit DB Terminal Values - AI800_2.1

RTD Input : Limit check

0 — EN_H2
0.0 — HI_LIM2 VALUE>H2 —
0 — EN_H1
0.0 — HI_LIM1 VALUE>H1 —
0 — EN_L1
0.0 — LO_LIM1 VALUE<L1 —
0 — EN_L2
0.0 — LO_LIM2 VALUE<L2 —
1.0 — HYST

Terminal Description, Limit check

Terminal Name	Value entered by	Default value	PC connection data type	Description	Remarks
EN_H2	user	0	–	1 = **EN**ables **H**igh limit no **2**	–
HI_LIM2	user	0.0	–	**HI**gh **LIM**it no. **2** in °C, °F, or Ω depending on conversion parameter.	Accepted value HI_LIM2≥HI_LIM1. HI_LIM2 > HI_LIM1 > LO_LIM1 > LO_LIM2 required if at least one value is not zero. Moreover the difference of two neighboring limits must be greater hysteresis.
EN_H1	user	0	–	1 = **EN**ables **H**igh limit no **1**	–

Terminal Description, Limit check (Continued)

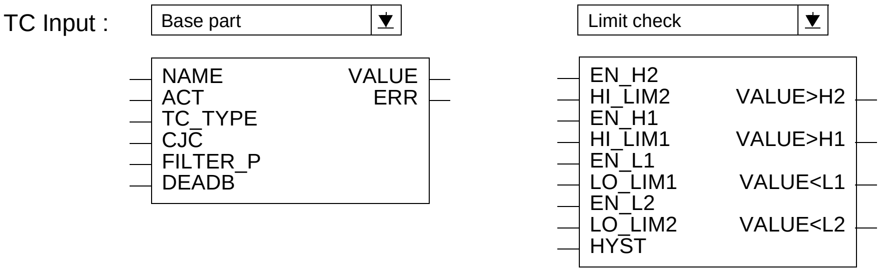
Terminal Name	**Value entered by**	**Default value**	**PC connection data type**	**Description**	**Remarks**
HI_LIM1	user	0.0	–	**HI**gh **LIM**it no. **1** in °C, °F, or Ω depending on conversion parameter.	Accepted value HI_LIM1≥LO_LIM1. HI_LIM2 > HI_LIM1 > LO_LIM1 > LO_LIM2 required if at least one value is not zero. Moreover the difference of two neighboring limits must be greater hysteresis.
EN_L1	user	0	–	1 = **EN**ables **L**ow limit no **1**	–
LO_LIM1	user	0.0	–	**LO**w **LIM**it no. **1** in °C, °F, or Ω depending on conversion parameter.	Accepted value HI_LIM1≥LO_LIM1. HI_LIM2 > HI_LIM1 > LO_LIM1 > LO_LIM2 required if at least one value is not zero. Moreover the difference of two neighboring limits must be greater hysteresis.
EN_L2	user	0	–	1 = **EN**ables **L**ow limit no **2**	–
LO_LIM2	user	0.0	–	**LO**w **LIM**it no. **2** in °C, °F, or Ω depending on conversion parameter.	Accepted value LO_LIM1≥LO_LIM2. HI_LIM2 > HI_LIM1 > LO_LIM1 > LO_LIM2 required if at least one value is not zero. Moreover the difference of two neighboring limits must be greater hysteresis.
HYST	user	1.0	–	**HYST**eresis for limit check.	–
VALUE>H2	system	–	B(r)	1 = **VALUE** has exceeded **H**igh Limit no. **2**.	–
VALUE>H1	system	–	B(r)	1 = **VALUE** has exceeded **H**igh Limit no. **1**.	–
VALUE<L1	system	–	B(r)	1 = **VALUE** has fallen below **L**ow Limit no. **1**.	–
VALUE<L2	system	–	B(r)	1 = **VALUE** has fallen below **L**ow Limit no. **2**.	–

TC Input AIS835

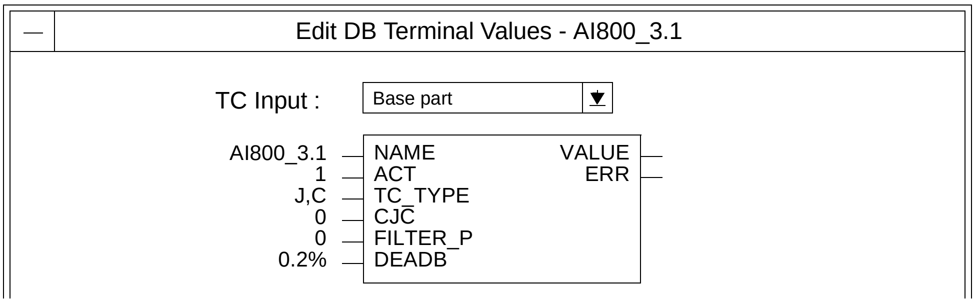
Summary

The data base element TC Input is subordinate to the TC module data base element specifying an AI835 hardware module.

Overview



Base part



AI800_3.1 NAME
1 ACT
J,C TC_TYPE
0 CJC
0 FILTER_P
0.2% DEADB

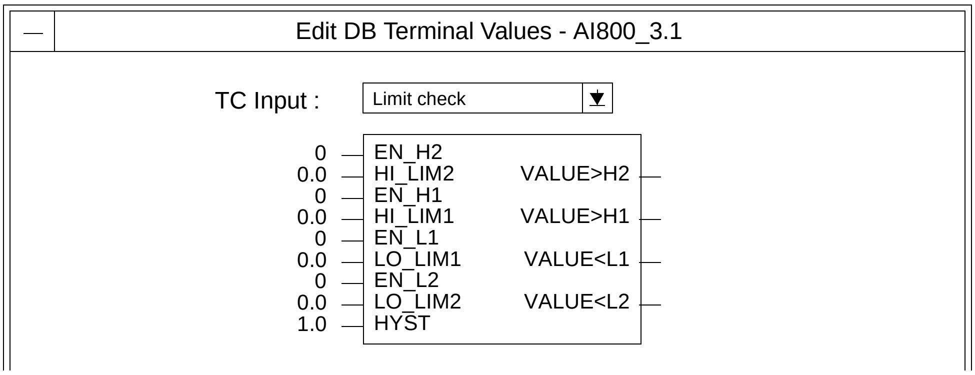
Terminal Description, Base part

Terminal Name	Value entered by	Default value	PC connection data type	Description	Remarks
NAME	user	AI800_ x.y	–	Unique **NAME** of the I/O signal.	Max. 20 characters.
ACT	user	1	–	Channel is: 0 = spare 1 = **ACT**ive	–
TC_TYPE	user	J,C	–	**T**hermo**C**ouple **TYPE**. Values: See the table “TC-Types” in the description of the module element.	Both for Celsius and Fahrenheit. Value inherited from module element.

Terminal Description, Base part (Continued)

Terminal Name	Value entered by	Default value	PC connection data type	Description	Remarks
CJC	user	0	–	**C**old **J**unction **C**ompensation. Values: 0 = Cold Junction Compensation 1 = Fixed Junction Compensation	–
FILTER_P	user	0	–	**FILTER P**arameter. Values: 0 = no filtering 0ms…9500ms, 10s…95s, 100s…650s	–
DEADB	user	0.2%	–	**DEADB**and. Values: -1 = update every time 0%, 0.003%, 0.009%, 0.02%, 0.05%, 0.1%, 0.2%, 0.4%, 0.8%, 1.6%, 3.2%	–
VALUE	system	–	R(r)	Signal **VALUE** in °C, °F, or mV depending on conversion parameter.	–
ERR	system	–	B(r)	**ERR**or indicates fatal errors, such as configuration errors or hardware errors.	–

Limit check



Edit DB Terminal Values - AI800_3.1

TC Input : Limit check

0 — EN_H2
0.0 — HI_LIM2 VALUE>H2 —
0 — EN_H1
0.0 — HI_LIM1 VALUE>H1 —
0 — EN_L1
0.0 — LO_LIM1 VALUE<L1 —
0 — EN_L2
0.0 — LO_LIM2 VALUE<L2 —
1.0 — HYST

Terminal Description, Limit check

Terminal Name	Value entered by	Default value	PC connection data type	Description	Remarks
EN_H2	user	0	–	1 = **EN**ables **H**igh limit no **2**	–

Terminal Description, Limit check (Continued)

Terminal Name	Value entered by	Default value	PC connection data type	Description	Remarks
HI_LIM2	user	0.0	–	**HI**gh **LIM**it no. **2** in °C, °F, or mV depending on conversion parameter.	Accepted value HI_LIM2≥HI_LIM1. HI_LIM2 > HI_LIM1 > LO_LIM1 > LO_LIM2 required if at least one value is not zero. Moreover the difference of two neighboring limits must be greater hysteresis.
EN_H1	user	0	–	1 = **EN**ables **H**igh limit no **1**	–
HI_LIM1	user	0.0	–	**HI**gh **LIM**it no. **1** in °C, °F, or mV depending on conversion parameter.	Accepted value HI_LIM1L≥O_LIM1. HI_LIM2 > HI_LIM1 > LO_LIM1 > LO_LIM2 required if at least one value is not zero. Moreover the difference of two neighboring limits must be greater hysteresis.
EN_L1	user	0	–	1 = **EN**ables **L**ow limit no **1**	–
LO_LIM1	user	0.0	–	**LO**w **LIM**it no. **1** in °C, °F, or mV depending on conversion parameter.	Accepted value HI_LIM1≥LO_LIM1. HI_LIM2 > HI_LIM1 > LO_LIM1 > LO_LIM2 required if at least one value is not zero. Moreover the difference of two neighboring limits must be greater hysteresis.
EN_L2	user	0	–	1 = **EN**ables **L**ow limit no **2**	–
LO_LIM2	user	0.0	–	**LO**w **LIM**it no. **2** in °C, °F, or mV depending on conversion parameter.	Accepted value LO_LIM1≥LO_LIM2. HI_LIM2 > HI_LIM1 > LO_LIM1 > LO_LIM2 required if at least one value is not zero. Moreover the difference of two neighboring limits must be greater hysteresis.
HYST	user	1.0	–	**HYST**eresis for limit check.	–
VALUE>H2	system	–	B(r)	1 = **VALUE** has exceeded **H**igh Limit no. **2**.	–
VALUE>H1	system	–	B(r)	1 = **VALUE** has exceeded **H**igh Limit no. **1**.	–
VALUE<L1	system	–	B(r)	1 = **VALUE** has fallen below **L**ow Limit no. **1**.	–
VALUE<L2	system	–	B(r)	1 = **VALUE** has fallen below **L**ow Limit no. **2**.	–

AO module AO810, AO820

Summary

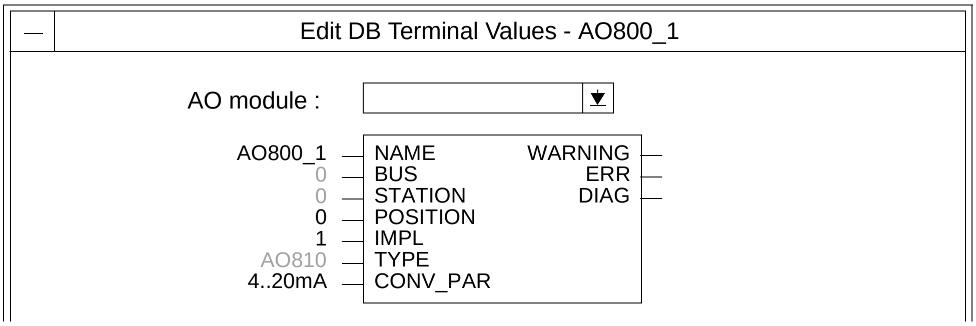
The AO module data base element specifies an Analog Output hardware module of type:

- AO810, 1×8 channel, 0–20mA
- AO820, 4×1 channel, bipolar

The data base element is superior to the signal elements associated to the analog output channels in the module and contains diagnostic information of the I/O module.

The Engineering Station will create:

- 1 data base element of type AO module
- 8 (AO810) or 4 (AO820) data base elements of type Analog Output.



Edit DB Terminal Values - AO800_1

AO module :

AO800_1 — NAME
0 — BUS
0 — STATION
0 — POSITION
1 — IMPL
AO810 — TYPE
4..20mA — CONV_PAR

WARNING —
ERR —
DIAG —

Terminal Description

Terminal Name	Value entered by	Default value	PC con-nection data type	Description	Remarks
NAME	user	AO800_x	–	Unique **NAME** of the I/O module.	Max. 20 characters.
BUS	predef	0	–	**BUS** number. Part of address.	–
STATION	predef	0	–	**STATION** number. Part of address.	–
POSITION	user	0	–	**POSITION**. Part of address.	–
IMPL	user	1	–	**IMPL**emented. 0 = the module is spare 1 = the module is implemented	–
TYPE	predef	AO810/ AO820	–	Module **TYPE** designation.	See call name.

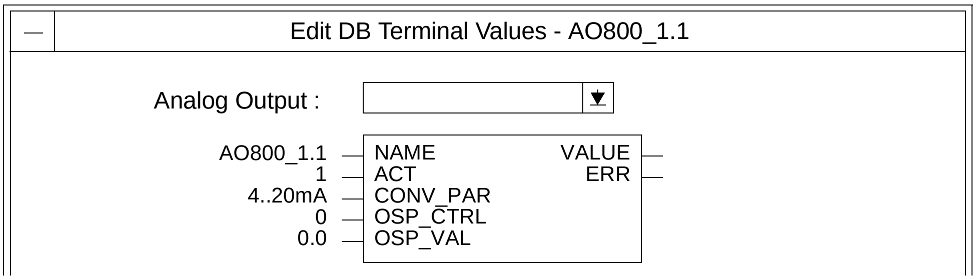
Terminal Description (Continued)

Terminal Name	**Value entered by**	**Default value**	**PC connection data type**	**Description**	**Remarks**
CONV_PAR	user	4..20mA	–	**CONV**ersion **PAR**ameter. Default value for the I/O signal elements: 0..20mA, 4..20mA	Modification denied after creation.
WARNING	system	–	B(r)	**WARNING** indicates a non-fatal error.	–
ERR	system	–	B(r)	**ERR**or indicates fatal errors, such as configuration errors or hardware errors.	–
DIAG	system	–	I(r)	**DIAG**nostics.	See the table “DIAG (I/O modules)” in Introduction

Analog Output AOS810, AOS820

Summary

The data base element Analog Output is subordinate to the AO module data base element specifying an AO810 or AO820 hardware module.



Edit DB Terminal Values - AO800_1.1

Analog Output :

AO800_1.1 — NAME
1 — ACT
4..20mA — CONV_PAR
0 — OSP_CTRL
0.0 — OSP_VAL

VALUE —
ERR —

Terminal Description

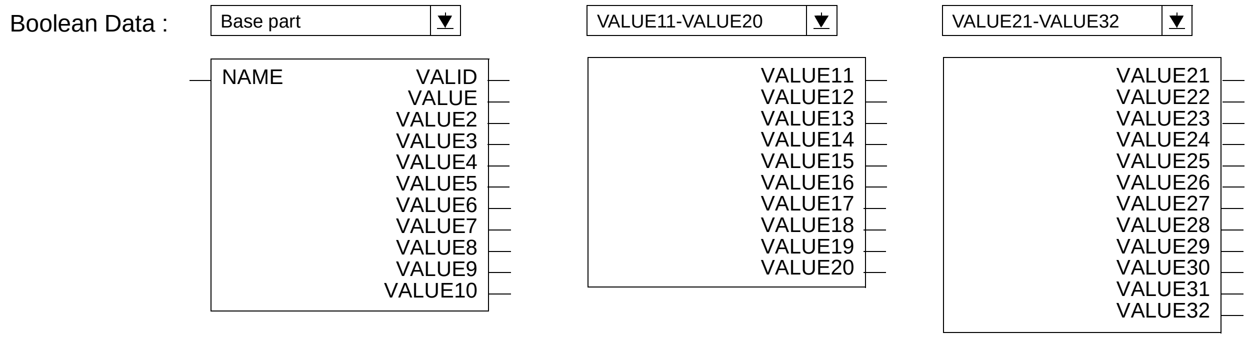
Terminal Name	**Value entered by**	**Default value**	**PC connection data type**	**Description**	**Remarks**
NAME	user	AO800_ x.y	–	Unique **NAME** of the I/O signal.	Max. 20 characters.
ACT	user	1	–	Channel is: 0 = spare 1 = **ACT**ive	–
CONV_PAR	user	4..20mA	–	**CONV**ersion **PAR**ameter. Values: 0..20mA, 4..20mA	Value inherited from module element.
OSP_CTRL	user	0	–	**O**utputs **S**et as **P**redetermined: 0 = keep current value 1 = set to OSP_VAL	–
OSP_VAL	user	0.0	–	**OSP VAL**ue to set if OSP_CTRL is set to 1.	–
VALUE	system	–	R(r)	Signal **VALUE**.	
ERR	system	–	B(r)	**ERR**or indicates fatal errors, such as configuration errors or hardware errors.	–

Boolean Data DAT(B)

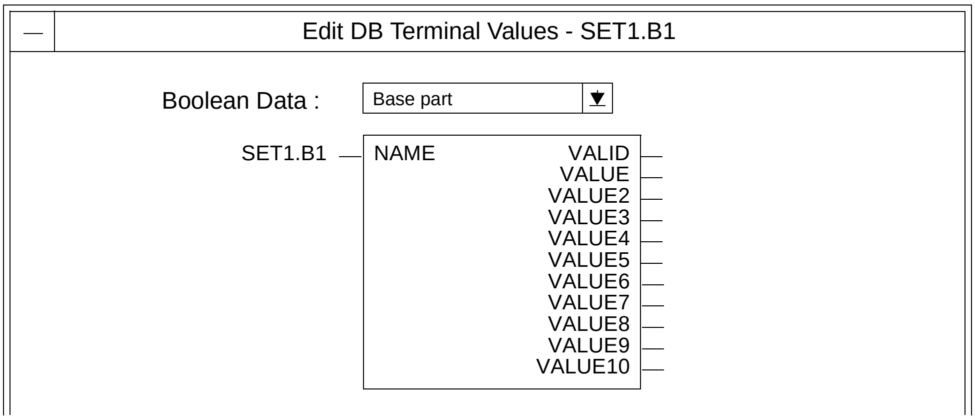
Summary

The DAT(B) data base element holds 32 packed boolean data values. The data values are given a name and a valid flag.

Overview



Base part



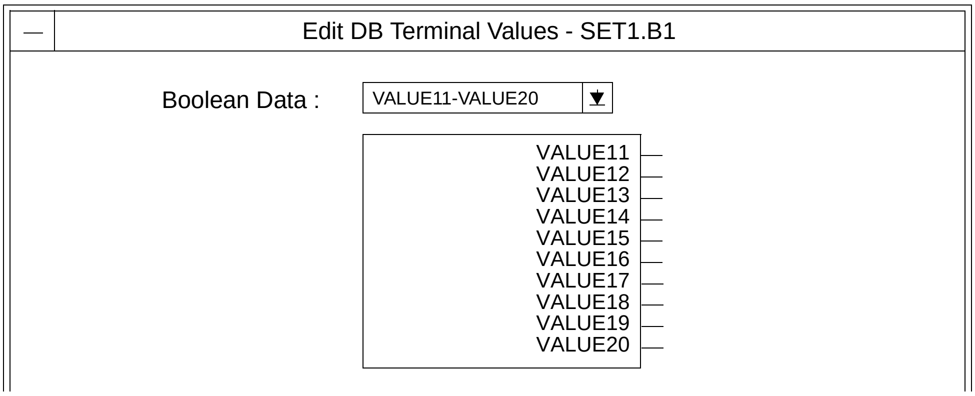
Terminal Description, Base part

Terminal Name	Value entered by	Default value	PC connection data type	Description	Remarks
NAME	user	*	–	Unique element **NAME**. Default name from superior Data Set element. When created independently default name is DATx.	Max. 20 characters. Example if DSP is named SET1: SET1.B1

Terminal Description, Base part (Continued)

Terminal Name	**Value entered by**	**Default value**	**PC connection data type**	**Description**	**Remarks**
VALID	PC	0	B(r/w)	**VALID**. Can be set by PC element (or MMI, …).	–
VALUE	system	–	B(r/w)	Boolean **VALUE**.	–
VALUE2	system	–	B(r/w)	Boolean **VALUE**.	–
: : VALUE10	system	–	B(r/w)	Boolean **VALUE**.	–

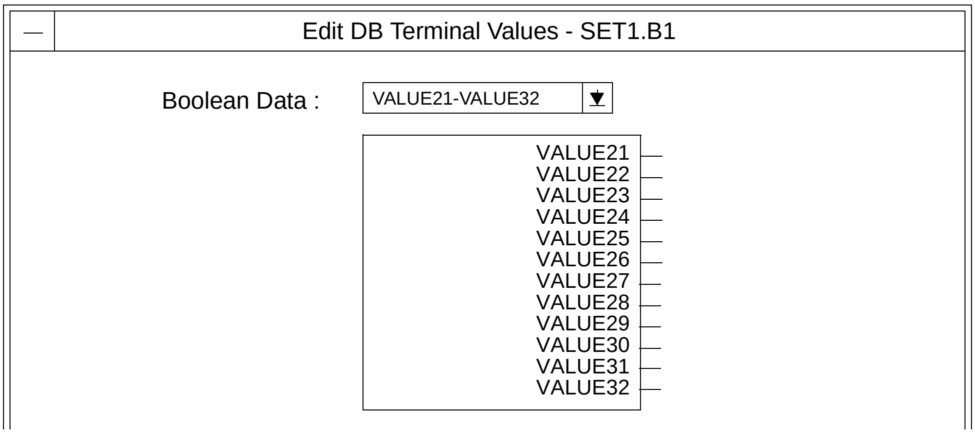
VALUE11-VALUE20



Edit DB Terminal Values - SET1.B1

Boolean Data : VALUE11-VALUE20

VALUE21-VALUE32



Edit DB Terminal Values - SET1.B1

Boolean Data : VALUE21-VALUE32

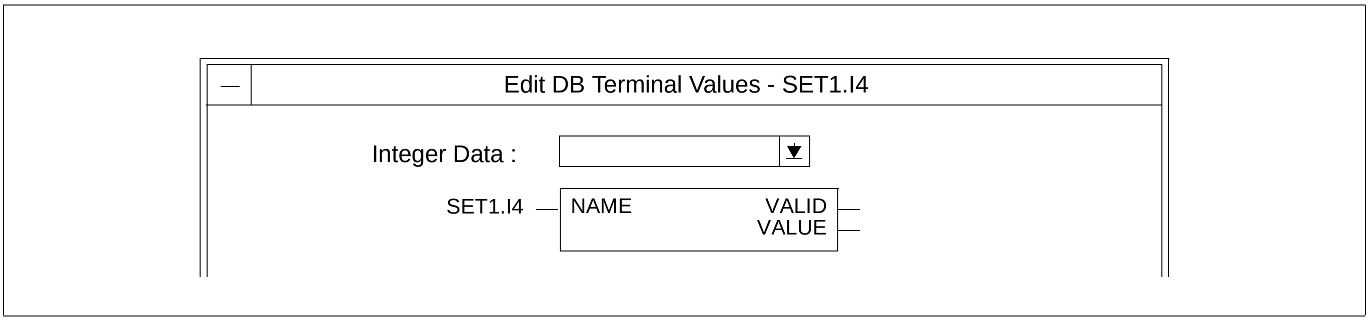
Terminal Description, VALUE11-VALUE32

Terminal Name	Value entered by	Default value	PC connection data type	Description	Remarks
VALUE11	system	–	B(r/w)	Boolean **VALUE**.	–
VALUE12	system	–	B(r/w)	Boolean **VALUE**.	–
: : VALUE32	system	–	B(r/w)	Boolean **VALUE**.	–

Integer Data DAT(I)

Summary

The DAT(I) data base element holds one 16 bit integer data value. The data value is given a name and a valid flag.



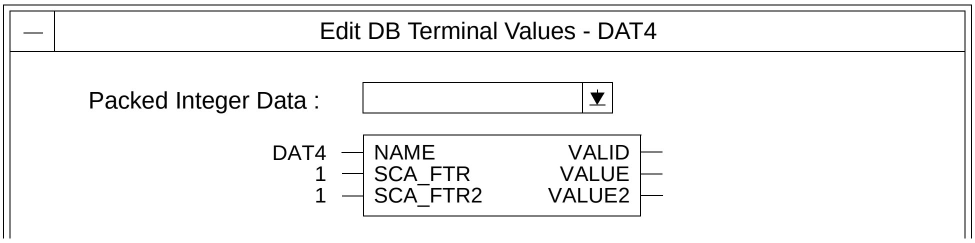
Terminal Description

Terminal Name	Value entered by	Default value	PC connection data type	Description	Remarks
NAME	user	*	–	Unique element **NAME**. Default name from superior Data Set element. When created independently default name is DATx.	Max. 20 characters. Example if DSP is named SET1: SET1.I1
VALID	PC	0	B(r/w)	**VALID** flag. Can be set by PC element (or MMI).	–
VALUE	system	–	I(r/w)	**VALUE** of type Integer.	–

Packed Integer Data DAT(II)

Summary

The DAT(II) data base element holds two 16 bit integer values. The data values are given a name and a valid flag. The element can not be created automatically by a DataSet Peripheral (DSP) element.



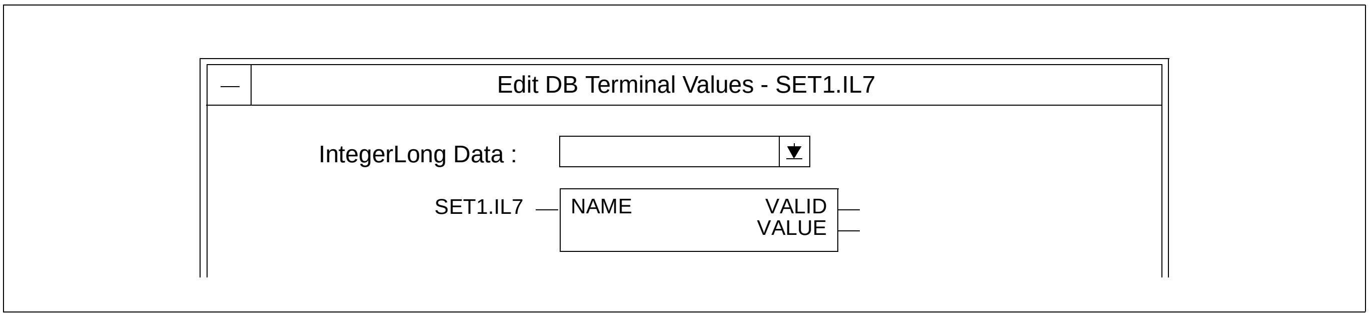
Terminal Description

Terminal Name	**Value entered by**	**Default value**	**PC connection data type**	**Description**	**Remarks**
NAME	user	DATx	–	Unique element **NAME**.	Max. 19 characters. One character (L or H) will be added for AdvaSoft.
SCA_FTR	user	1	–	**SCA**ling **F**ac**T**o**R** for VALUE. Allowed values: 0.001, 0.01, 0.1, 1, 10, 100, 1000.	–
SCA_FTR2	user	1	–	**SCA**ling **F**ac**T**o**R** for VALUE**2**. Allowed values: 0.001, 0.01, 0.1, 1, 10, 100, 1000.	–
VALID	PC	0	B(r/w)	**VALID** flag. Can be set by PC element (or MMI).	–
VALUE	system	–	I(r/w)	**VALUE** of type Integer.	–
VALUE2	system	–	I(r/w)	**VALUE** number **2** of type Integer.	–

IntegerLong Data DAT(IL)

Summary

The DAT(IL) data base element contains one 32 bit integer data value. The data value is given a name and a valid flag.



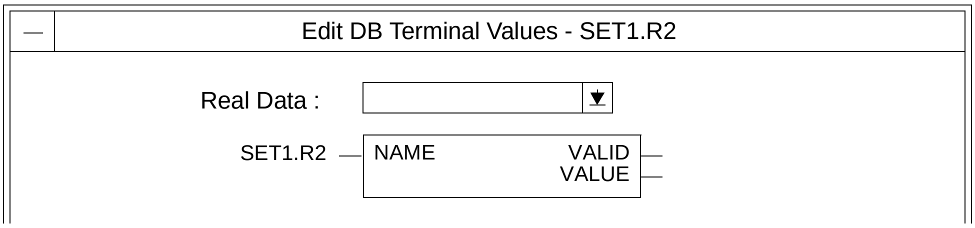
Terminal Description

Terminal Name	Value entered by	Default value	PC connection data type	Description	Remarks
NAME	user	*	–	Unique element **NAME**. Default name from superior Data Set element. When created independently default name is DATx.	Max. 20 characters. Example if DSP is named SET1: SET1.IL1
VALID	PC	0	B(r/w)	**VALID** flag. Can be set by PC element (or MMI).	–
VALUE	system	–	IL(r/w)	**VALUE** of type IntegerLong.	–

Real Data DAT(R)

Summary

The DAT(R) data base element holds one real data value. The data value is given a name and a valid flag.



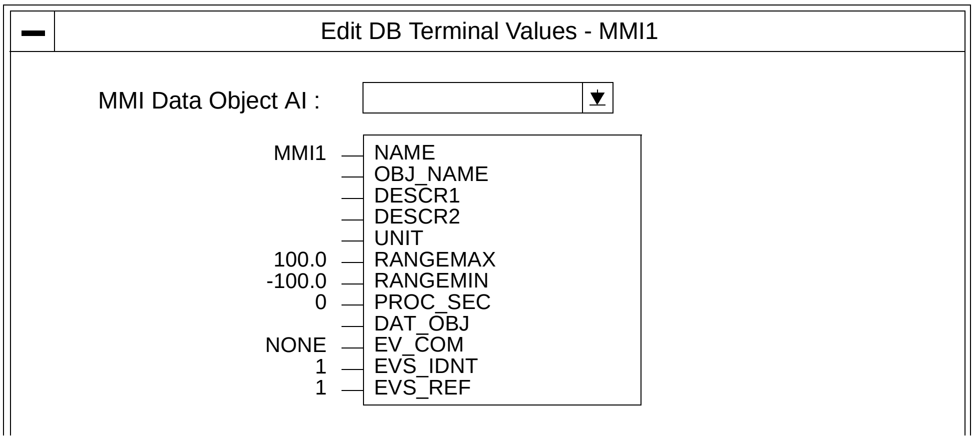
Terminal Description

Terminal Name	Value entered by	Default value	PC connection data type	Description	Remarks
NAME	user	*	–	Unique element **NAME**. Default name from superior Data Set element. When created independently default name is DATx.	Max. 20 characters. Example if DSP is named SET1: SET1.R1
VALID	PC	0	B(r/w)	**VALID** flag. Can be set by PC element (or MMI).	–
VALUE	system	–	R(r/w)	**VALUE** of type Real.	–

MMI Data Object AI DAT_AI

Summary

The DAT_AI data base element represents an Analog Input object mapped to a DAT object and possibly to an Event Channel in the MMI (AdvaSoft).



Edit DB Terminal Values - MMI1

MMI Data Object AI :

MMI1	NAME
	OBJ_NAME
	DESCR1
	DESCR2
	UNIT
100.0	RANGEMAX
-100.0	RANGEMIN
0	PROC_SEC
	DAT_OBJ
NONE	EV_COM
1	EVS_IDNT
1	EVS_REF

Terminal Description

Terminal Name	**Value entered by**	**Default value**	**PC connection data type**	**Description**	**Remarks**
NAME	user	MMIx	–	Unique **NAME** of the element.	Max. 20 characters.
OBJ_NAME	user		–	**OBJ**ect **NAME** in MMI.	Max. 20 characters.
DESCR1	user		–	Object **DESCR**iption, part **1**.	Max. 20 characters.
DESCR2	user		–	Object **DESCR**iption, part **2**.	Max. 8 characters.
UNIT	user		–	**UNIT**.	Max. 6 characters.
RANGEMAX	user	100.0	–	**RANGE MAX**imum value.	–
RANGEMIN	user	-100.0	–	**RANGE MIN**imum value.	–
PROC_SEC	user	0	–	**PROC**ess **SEC**tion.	0 … 16
DAT_OBJ	user	*	–	Reference to a **DAT**(R) **OBJ**ect which must be referenced itself by a DSP element.	–

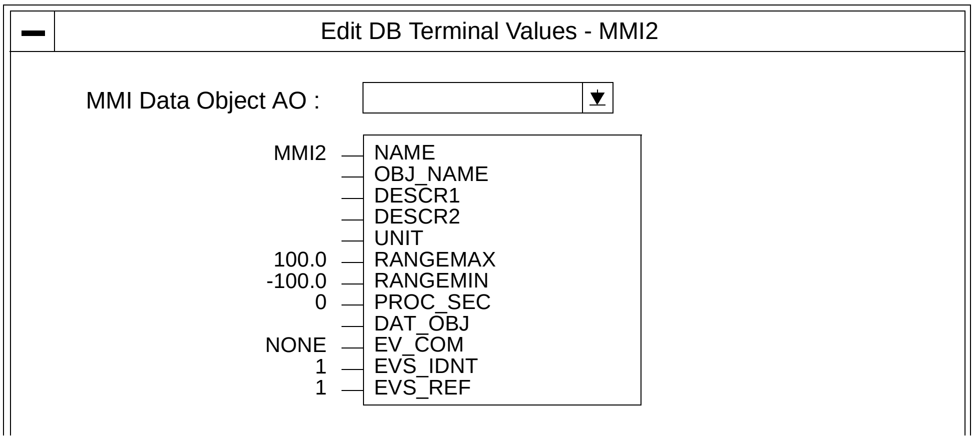
Terminal Description (Continued)

Terminal Name	**Value entered by**	**Default value**	**PC connection data type**	**Description**	**Remarks**
EV_COM	user	NONE	–	**EV**ent **S**et **COM**munication. Values: SEND, NONE.	SEND: Generate events and send them via EVS(S). NONE: Generate no events.
EVS_IDNT	user	1	–	**ID**e**NT** of **EV**ent **S**et element.	1 … 65000
EVS_REF	user	1	–	**REF**erence number of **EV**ent **S**et element.	1 … 32

MMI Data Object AO DAT_AO

Summary

The DAT_AO data base element represents an Analog Output object mapped to a DAT object and possibly to an Event Channel in the MMI (AdvaSoft).



Edit DB Terminal Values - MMI2

MMI Data Object AO :

```
  MMI2  — NAME
        — OBJ_NAME
        — DESCR1
        — DESCR2
        — UNIT
 100.0  — RANGEMAX
-100.0  — RANGEMIN
     0  — PROC_SEC
        — DAT_OBJ
  NONE  — EV_COM
     1  — EVS_IDNT
     1  — EVS_REF
```

Terminal Description

Terminal Name	**Value entered by**	**Default value**	**PC connection data type**	**Description**	**Remarks**
NAME	user	MMIx	–	Unique **NAME** of the element.	Max. 20 characters.
OBJ_NAME	user		–	**OBJ**ect **NAME** in MMI.	Max. 20 characters.
DESCR1	user		–	Object **DESCR**iption, part **1**.	Max. 20 characters.
DESCR2	user		–	Object **DESCR**iption, part **2**.	Max. 8 characters.
UNIT	user		–	**UNIT**.	Max. 6 characters.
RANGEMAX	user	100.0	–	**RANGE MAX**imum value.	–
RANGEMIN	user	-100.0	–	**RANGE MIN**imum value.	–
PROC_SEC	user	0	–	**PROC**ess **SEC**tion.	0 … 16
DAT_OBJ	user	*	–	Reference to a **DAT**(R) **OBJ**ect which must be referenced itself by a DSP element.	–

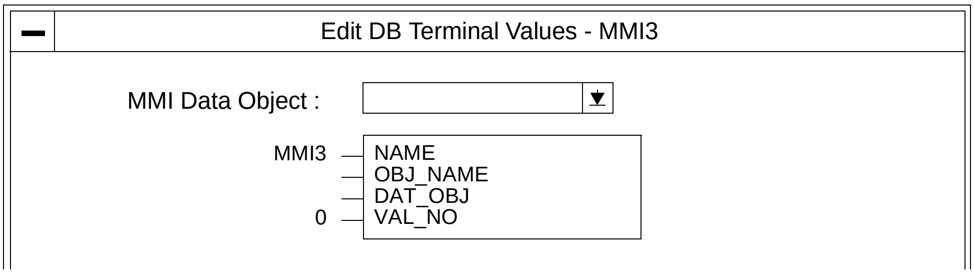
Terminal Description (Continued)

Terminal Name	Value entered by	Default value	PC connection data type	Description	Remarks
EV_COM	user	NONE	–	**EV**ent **S**et **COM**munication. Values: SEND, NONE.	SEND: Generate events and send them via EVS(S). NONE: Generate no events.
EVS_IDNT	user	1	–	**ID**e**NT** of **EV**ent **S**et element.	1 … 65000
EVS_REF	user	1	–	**REF**erence number of **EV**ent **S**et element.	1 … 32

MMI Data Object DAT_DAT

Summary

The DAT_DAT data base element represents a DAT object in the MMI (AdvaSoft).



Edit DB Terminal Values - MMI3

MMI Data Object :

MMI3 — NAME
— OBJ_NAME
— DAT_OBJ
0 — VAL_NO

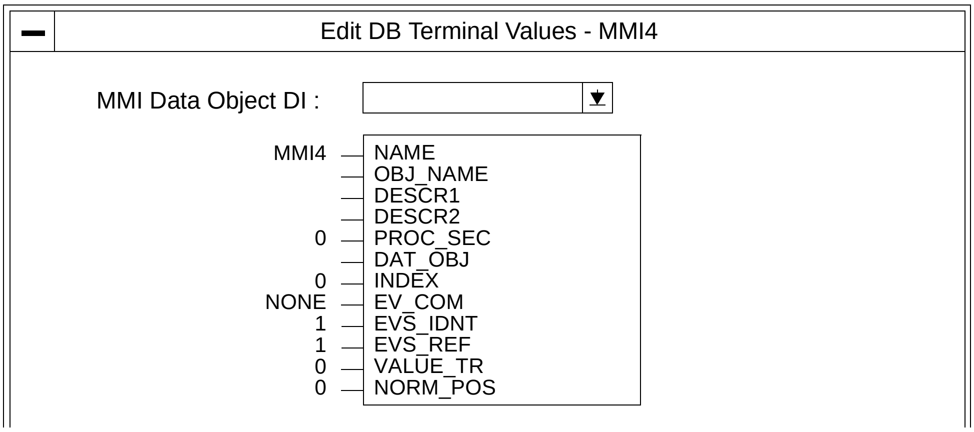
Terminal Description

Terminal Name	**Value entered by**	**Default value**	**PC connection data type**	**Description**	**Remarks**
NAME	user	MMIx	–	Unique **NAME** of the element.	Max. 20 characters.
OBJ_NAME	user		–	**OBJ**ect **NAME** in MMI.	Max. 20 characters.
DAT_OBJ	user	*	–	Reference to a **DAT OBJ**ect which must be referenced itself by a DSP element. Allowed references: DAT(B), DAT(I), DAT(II), DAT(IL), or DAT(R).	–
VAL_NO	user	0	–	**VAL**ue **N**umber. Applies when the DAT object that is referenced by terminal DAT_OBJ is of type DAT(II). 0 = DAT object is not of type DAT(II) 1 = terminal VALUE of DAT(II) is used 2 = terminal VALUE2 of DAT(II) is used	–

MMI Data Object DI DAT_DI

Summary

The DAT_DI data base element represents an Digital Input object mapped to a DAT object and possibly to an Event Channel in the MMI (AdvaSoft).



Edit DB Terminal Values - MMI4

MMI Data Object DI :

MMI4	NAME
	OBJ_NAME
	DESCR1
	DESCR2
0	PROC_SEC
	DAT_OBJ
0	INDEX
NONE	EV_COM
1	EVS_IDNT
1	EVS_REF
0	VALUE_TR
0	NORM_POS

Terminal Description

Terminal Name	**Value entered by**	**Default value**	**PC connection data type**	**Description**	**Remarks**
NAME	user	MMIx	–	Unique **NAME** of the element.	Max. 20 characters.
OBJ_NAME	user		–	**OBJ**ect **NAME** in MMI.	Max. 20 characters.
DESCR1	user		–	Object **DESCR**iption, part **1**.	Max. 20 characters.
DESCR2	user		–	Object **DESCR**iption, part **2**.	Max. 8 characters.
PROC_SEC	user	0	–	**PROC**ess **SEC**tion.	0 … 16
DAT_OBJ	user	*	–	Reference to a **DAT**(B) **OBJ**ect which must be referenced itself by a DSP element.	–
INDEX	user	0	–	**INDEX** of boolean value in DAT(B) object.	0 … 31
EV_COM	user	NONE	–	**EV**ent **S**et **COM**munication. Values: SEND, NONE.	SEND: Generate events and send them via EVS(S). NONE: Generate no events.
EVS_IDNT	user	1	–	**ID**e**NT** of **EV**ent **S**et element.	1 … 65000

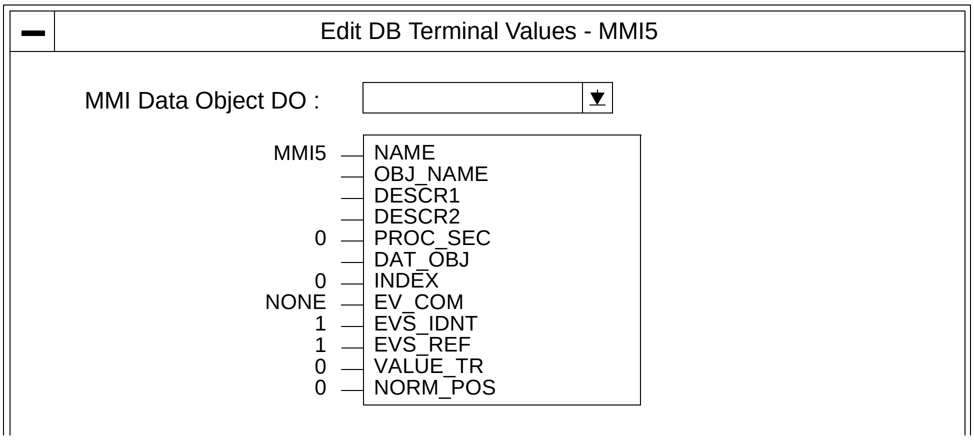
Terminal Description (Continued)

Terminal Name	**Value entered by**	**Default value**	**PC connection data type**	**Description**	**Remarks**
EVS_REF	user	1	–	**REF**erence number of **EV**ent **S**et element.	1 … 32
VALUE_TR	user	0	–	**VALUE TR**eatment.	Recommended settings: 0 = no event reporting 1 = event reporting, no alarm handling 2 = event reporting & alarm handling
NORM_POS	user	0	–	**NORM**al **POS**ition. Normal signal value.	–

MMI Data Object DO DAT_DO

Summary

The DAT_DO data base element represents an Digital Output object mapped to a DAT object and possibly to an Event Channel in the MMI (AdvaSoft).



Edit DB Terminal Values - MMI5

MMI Data Object DO :

MMI5 — NAME
— OBJ_NAME
— DESCR1
— DESCR2
0 — PROC_SEC
— DAT_OBJ
0 — INDEX
NONE — EV_COM
1 — EVS_IDNT
1 — EVS_REF
0 — VALUE_TR
0 — NORM_POS

Terminal Description

Terminal Name	**Value entered by**	**Default value**	**PC connection data type**	**Description**	**Remarks**
NAME	user	MMIx	–	Unique **NAME** of the element.	Max. 20 characters.
OBJ_NAME	user		–	**OBJ**ect **NAME** in MMI.	Max. 20 characters.
DESCR1	user		–	Object **DESCR**iption, part **1**.	Max. 20 characters.
DESCR2	user		–	Object **DESCR**iption, part **2**.	Max. 8 characters.
PROC_SEC	user	0	–	**PROC**ess **SEC**tion.	0 … 16
DAT_OBJ	user	*	–	Reference to a **DAT**(B) **OBJ**ect which must be referenced itself by a DSP element.	–
INDEX	user	0	–	**INDEX** of boolean value in DAT(B) object.	0 … 31
EV_COM	user	NONE	–	**EV**ent **S**et **COM**munication. Values: SEND, NONE.	SEND: Generate events and send them via EVS(S). NONE: Generate no events.
EVS_IDNT	user	1	–	**ID**e**NT** of **EV**ent **S**et element.	1 … 65000

Terminal Description (Continued)

Terminal Name	Value entered by	Default value	PC connection data type	Description	Remarks
EVS_REF	user	1	–	**REF**erence number of **EV**ent **S**et element.	1 … 32
VALUE_TR	user	0	–	**VALUE TR**eatment.	Recommended settings: 0 = no event reporting 1 = event reporting, no alarm handling 2 = event reporting & alarm handling
NORM_POS	user	0	–	**NORM**al **POS**ition. Normal signal value.	–

DI module DI81x, DI82x

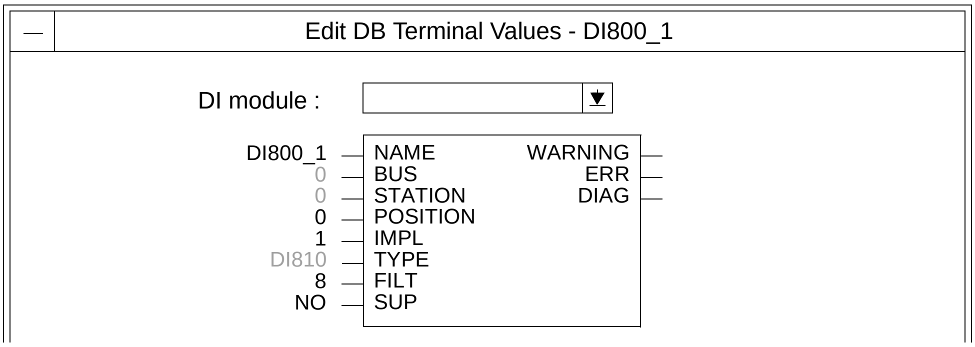
Summary

The DI module data base element specifies a Digital Input hardware module. The data base element is superior to the signal elements associated to the digital input channels in the module. The following Digital Input modules are supported:

- DI810: 16 channels with 24 V DC. Isolation: 2 groups of 8. Rated isolation voltage 50 V.
- DI811: 16 channels with 48 V DC. Isolation: 2 groups of 8. Rated isolation voltage 50 V.
- DI814: 16 channels with 24 V DC. Current source. Rated isolation voltage 50 V.
- DI820: 8 channels with 120 V AC. Individual isolation. Rated isolation voltage 250 V.
- DI821: 8 channels with 230 V AC. Individual isolation. Rated isolation voltage 500 V.

The Engineering Station will create:

- 1 data base element of type DI module
- 16 (DI81x) or 8 (DI82x) data base elements of type Digital Input.



Edit DB Terminal Values - DI800_1

DI module :

DI800_1	NAME	WARNING
0	BUS	ERR
0	STATION	DIAG
0	POSITION	
1	IMPL	
DI810	TYPE	
8	FILT	
NO	SUP	

Terminal Description

Terminal Name	**Value entered by**	**Default value**	**PC connection data type**	**Description**	**Remarks**
NAME	user	DI800_x	–	Unique **NAME** of the I/O module.	Max. 20 characters.
BUS	predef	0	–	**BUS** number. Part of address.	–
STATION	predef	0	–	**STATION** number. Part of address.	–
POSITION	user	0	–	**POSITION**. Part of address.	–

Terminal Description (Continued)

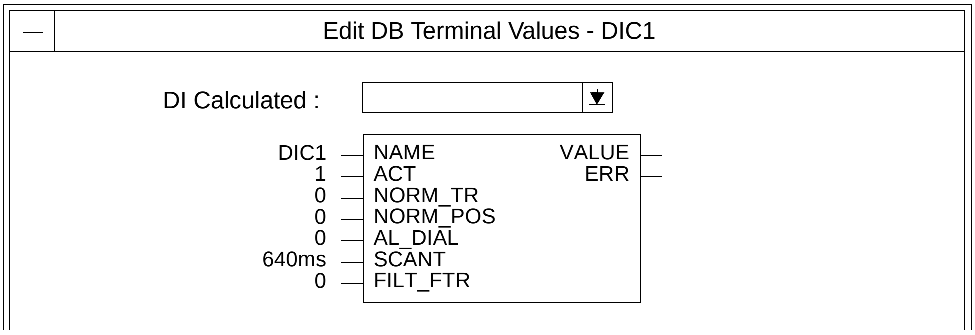
Terminal Name	Value entered by	Default value	PC connection data type	Description	Remarks
IMPL	user	1	B(r)	**IMPL**emented. 0 = the module is spare 1 = the module is implemented	–
TYPE	predef	DI81x/ DI82x	–	Module **TYPE** designation.	–
FILT	user	8	–	On/off delay **FILT**er time in ms. Values: 2, 4, 8 and 16.	The actual filter time may vary in the following intervals: 2 … 3 ms, 4 … 6 ms, 8 … 12 ms and 16 … 24 ms.
SUP	user	NO	–	Sensor power **SUP**ervision of channel group 1 and 2. Values: YES = enabled NO = not enabled	–
WARNING	system	–	B(r)	**WARNING** indicates a non-fatal error.	–
ERR	system	–	B(r)	**ERR**or indicates fatal errors, such as configuration errors or hardware errors.	–
DIAG	system	–	I(r)	**DIAG**nostics.	See the table “DIAG (I/O modules)” in Introduction

DI Calculated DIC

Summary

The DI Calculated element is an event channel element used for detection of calculated digital events.

An event is detected when the boolean value (terminal VALUE) changes from 0 to 1 or vice versa, and event generation is deblocked (terminal NORM_TR = 1). There is a filtering facility to suppress event generation in case of rapidly changing values.



Edit DB Terminal Values - DIC1

DI Calculated :

```
   DIC1 — NAME          VALUE —
      1 — ACT             ERR —
      0 — NORM_TR
      0 — NORM_POS
      0 — AL_DIAL
  640ms — SCANT
      0 — FILT_FTR
```

Terminal Description

Terminal Name	**Value entered by**	**Default value**	**PC connection data type**	**Description**	**Remarks**
NAME	user	DICx	–	Unique **NAME** of the event channel.	Max. 20 characters.
ACT	user	1	–	Element is: 0 = not **ACT**ive 1 = **ACT**ive	Element must be referenced by an EVS(S) when ACT = 1.
NORM_TR	user/PC	0	B(r/w)	**NORM**al **TR**eatment. 0 = event detection disabled 1 = event detection enabled	Not allowed to change on-line.
NORM_POS	user	0	–	**NORM**al **POS**ition for this channel.	–
AL_DIAL	user	0	–	**DIAL** the master on **AL**arm. 0 = no dial on alarm 1 = dial on alarm	RCOM only.
SCANT	user	640ms	–	**SCAN T**ime for event detection. Values: 10ms, 20ms, 40ms, 80ms, 160ms, 320ms, 640ms, 1280ms, 2560ms, 5120ms, 10240ms, 20480ms, 40960ms, 81920ms, 163840ms, 327680ms	–

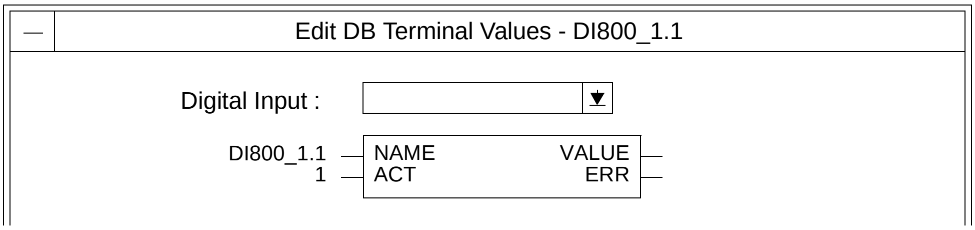
Terminal Description (Continued)

Terminal Name	**Value entered by**	**Default value**	**PC connection data type**	**Description**	**Remarks**
FILT_FTR	user	0	–	**FILT**er time **F**ac**T**o**R**. The filter time = FILT_FTR × SCANT is the duration of a value change before the change is accepted as event.	0 … 32
VALUE	PC	0	B(r/w)	Signal **VALUE** (is watched for events).	–
ERR	system	–	B(r)	**ERR**or flag indicating fatal errors.	–

Digital Input DIS81x, DIS82x

Summary

The data base element Digital Input is subordinate to the DI module data base element specifying an DI81x or DI82x (x = 0,1, …) hardware module.



Edit DB Terminal Values - DI800_1.1

Digital Input :

DI800_1.1 — NAME VALUE —
1 — ACT ERR —

Terminal Description

Terminal Name	**Value entered by**	**Default value**	**PC con-nection data type**	**Description**	**Remarks**
NAME	user	DI800_ x.y	–	Unique **NAME** of the I/O signal.	Max. 20 characters.
ACT	user	1	–	Element is: 0 = not **ACT**ive 1 = **ACT**ive	–
VALUE	system	–	B(r)	Signal **VALUE**.	–
ERR	system	–	B(r)	**ERR**or indicates fatal errors, such as configuration errors or hardware errors.	–

DO module DO81x, DO82x

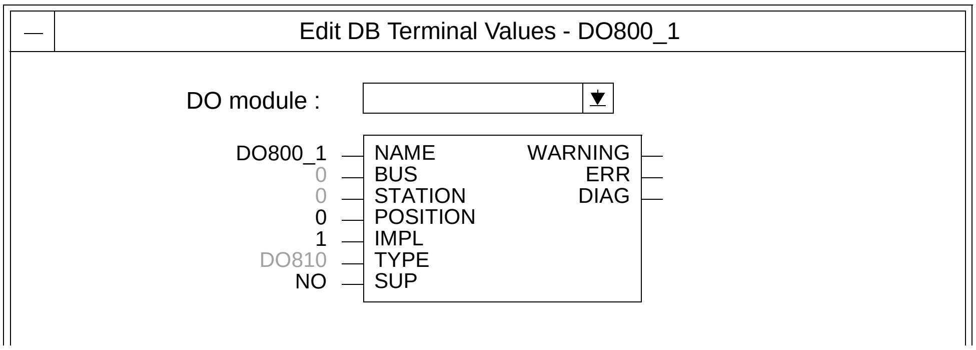
Summary

The DO module data base element specifies a Digital Output hardware module. The data base element is superior to the signal elements associated to the digital output channels in the module. The following modules are supported:

- DO810: 16 channels with 24 V DC, 0.5 A short circuit proof. Isolation: 2 groups of 8. Rated isolation voltage 50 V.
- DO814: 16 channels with 24 V DC, 0.5 A short circuit proof. Isolation: 2 groups of 8, current sink.
- DO815: 8 channels with 24 V, 2 A solid state and short circuit proof signal.
- DO820: 8 channel relay output, 24–230 V AC, 3 A, individual isolation. Rated isolation voltage 250 V.
- DO821: 8 channels with normally closed contacts.

The Engineering Station will create:

- 1 data base element of type DO module
- 16 (DO810, DO814) or 8 (DO815, DO820, DO821) data base elements of type Digital Output.



Edit DB Terminal Values - DO800_1

DO module :

DO800_1 — NAME
0 — BUS
0 — STATION
0 — POSITION
1 — IMPL
DO810 — TYPE
NO — SUP

WARNING —
ERR —
DIAG —

Terminal Description

Terminal Name	Value entered by	Default value	PC con-nection data type	Description	Remarks
NAME	user	DO800_x	–	Unique **NAME** of the I/O module.	Max. 20 characters.
BUS	predef	0	–	**BUS** number. Part of address.	–
STATION	predef	0	–	**STATION** number. Part of address.	–
POSITION	user	0	–	**POSITION**. Part of address.	–

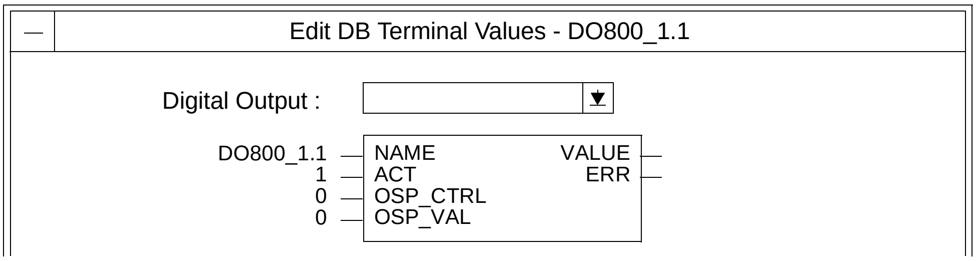
Terminal Description (Continued)

Terminal Name	**Value entered by**	**Default value**	**PC connection data type**	**Description**	**Remarks**
IMPL	user	1	–	**IMPL**emented. 0 = the module is spare 1 = the module is implemented	–
TYPE	predef	DO81x/ DO82x	–	Module **TYPE** designation: DO810, DO814, DO815, DO820, or DO821.	–
SUP	user	NO	–	Sensor power **SUP**ervision of channel group 1 and 2. Values: YES = enabled NO = not enabled	–
WARNING	system	–	B(r)	**WARNING** indicates a non-fatal error.	–
ERR	system	–	B(r)	**ERR**or indicates fatal errors, such as configuration errors or hardware errors.	–
DIAG	system	–	I(r)	**DIAG**nostics.	See the table “DIAG (I/O modules)” in Introduction

Digital Output DOS81x, DOS82x

Summary

The data base element Digital Output is subordinate to the DO module data base element specifying an DO81x or DO82x hardware module.



Edit DB Terminal Values - DO800_1.1

Digital Output :

Terminal Description

Terminal Name	Value entered by	Default value	PC con-nection data type	Description	Remarks
NAME	user	DO800_x.y	–	Unique **NAME** of the I/O signal.	Max. 20 characters.
ACT	user	1	–	Element is: 0 = not **ACT**ive 1 = **ACT**ive	–
OSP_CTRL	user	0	–	**O**utputs **S**et as **P**redetermined: 0 = keep current value 1 = set to OSP_VAL	–
OSP_VAL	user	0	–	**OSP VAL**ue to set if OSP_CTRL is set to 1.	–
VALUE	system	–	B(r/w)	Signal **VALUE**.	–
ERR	system	–	B(r)	**ERR**or indicates fatal errors, such as configuration errors or hardware errors.	–

DP module DP820

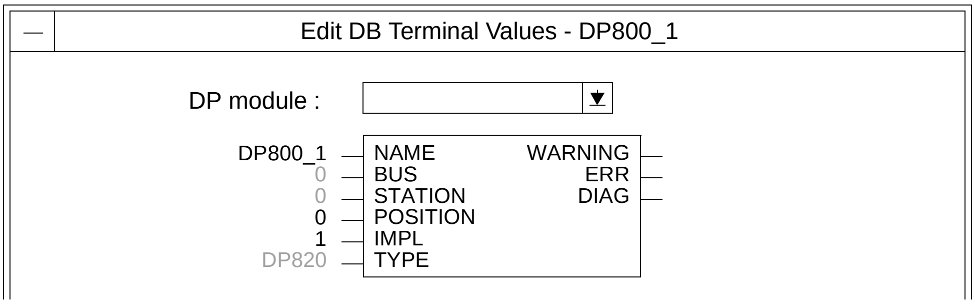
Summary

The DP module data base element specifies a 2 channel pulse counter. Each channel can be used for independent pulse count (length) measurement and frequency (speed) measurement. The data base element is superior to the signal elements associated to the pulse channels in the module.

The Engineering Station will create:

- 1 data base element of type DP module
- 2 data base elements of type Pulse

.



Edit DB Terminal Values - DP800_1

DP module :

DP800_1 — NAME
0 — BUS
0 — STATION
0 — POSITION
1 — IMPL
DP820 — TYPE

WARNING —
ERR —
DIAG —

Terminal Description

Terminal Name	Value entered by	Default value	PC con-nection data type	Description	Remarks
NAME	user	DP800_x	–	Unique **NAME** of the I/O module.	Max. 20 characters.
BUS	predef	0	–	**BUS** number. Part of address.	–
STATION	predef	0	–	**STATION** number. Part of address.	–
POSITION	user	0	–	**POSITION**. Part of address.	–
IMPL	user	1	–	**IMPL**emented. 0 = the module is spare 1 = the module is implemented	–
TYPE	predef	DP820	–	Module **TYPE** designation.	–
WARNING	system	–	B(r)	**WARNING** indicates a non-fatal error.	–
ERR	system	–	B(r)	**ERR**or indicates fatal errors, such as configuration errors or hardware errors.	–

Terminal Description (Continued)

Terminal Name	Value entered by	Default value	PC connection data type	Description	Remarks
DIAG	system	–	I(r)	**DIAG**nostics.	See the table “DIAG (I/O modules)” in Introduction

Function

DP820 offers two main functions:

1. Pulse counter measurement. A 29 bit bidirectional counter with:

- Coincidence detection controlling one digital output signal.
- Freezing of counter value depending of different conditions.
- Synchronization of counter depending of different conditions.

2. Frequency (or speed) measurement up to 1.5 MHz with:

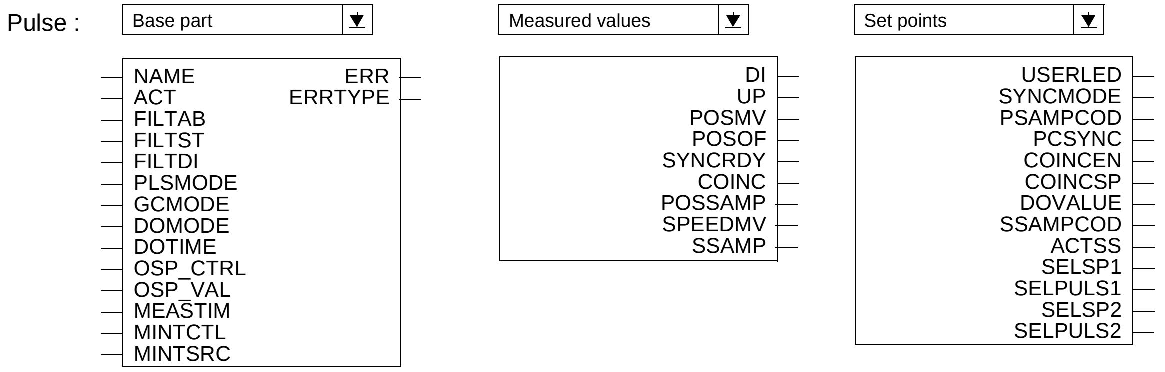
- Freezing of value depending of different conditions.
- Selectable measure time within 1…2000 ms.

Pulse DPS820

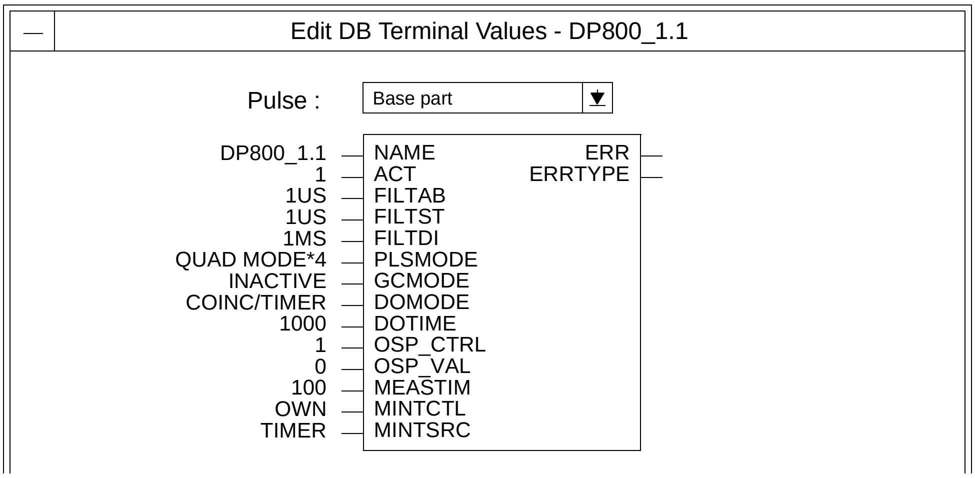
Summary

The data base element Pulse represents a channel for independent pulse count/length measurement and frequency/speed measurement. It is subordinated to the DP module data base element.

Overview



Base part



DP800_1.1	NAME
1	ACT
1US	FILTAB
1US	FILTST
1MS	FILTDI
QUAD MODE*4	PLSMODE
INACTIVE	GCMODE
COINC/TIMER	DOMODE
1000	DOTIME
1	OSP_CTRL
0	OSP_VAL
100	MEASTIM
OWN	MINTCTL
TIMER	MINTSRC

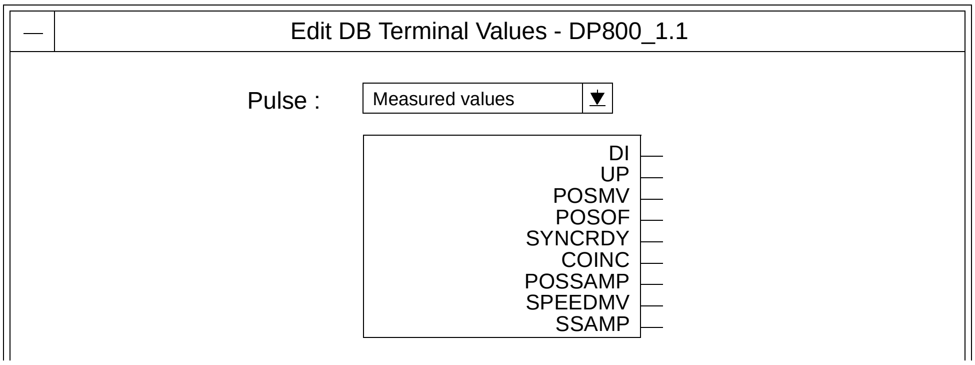
Terminal Description, Base part

Terminal Name	**Value entered by**	**Default value**	**PC connection data type**	**Description**	**Remarks**
NAME	user	DP800_ x.y	–	Unique **NAME** of the I/O signal.	Max. 20 characters.
ACT	user	1	–	Channel is: 0 = spare 1 = **ACT**ive	–
ERR	system	–	B(r)	**ERR**or detected on channel.	–
ERRTYPE	system	–	I(r)	**ERR**or **TYPE.** Detailed information for error indication.	See section “Error Handling“ below.
FILTAB	user	1US	–	**FILT**er time for **A** and **B** inputs. Possible values: UNFILTERED, 1US.	For UNFILTERED, see restrictions in the *S800 I/O Users Guide*.
FILTST	user	1US	–	**FILT**er time for **ST** input: 1 µs or 1 ms. Values: 1US, 1MS.	–
FILTDI	user	1MS	–	**FILT**er time for **DI** input: 1 ms or 5 ms. Values: 1MS, 5MS.	–
PLSMODE	user	QUAD MODE*4	–	**P**u**LS**e **MODE**: A:UP/B:DOWN QUAD MODE∗1 QUAD MODE∗2 QUAD MODE∗4 A:PULSE/B:DIR	See section “Pulse encoding“ below.
GCMODE	user	INACTIVE	–	**G**ated **C**ount **MODE**. Values: INACTIVE (always count) DI LEVEL (DI level controlled) DI RISING (DI positive edge controlled)	–
DOMODE	user	COINC/ TIMER	–	**D**igital **O**utput **MODE**. Activation by coincidence or DO value. Deactivation by timer or DO value. COINC/TIMER PC/TIMER PC/PC COINC/PC	See section “Digital Output mode“ below.
DOTIME	user	1000	–	**DO** pulse **TIME** in ms.	1 … 65535.
OSP_CTRL	user	0	–	**O**utput **S**et as **P**redetermined **C**on**TR**o**L**: 0 = Keep current value 1 = set to OSP_VAL	–
OSP_VAL	user	0	–	**O**utput **S**et as **P**redetermined **VAL**ue in case of OSP_CTRL = 1.	–
MEASTIM	user	100	–	Frequency **MEAS**urement **TIM**e in ms.	1 … 2000.

Terminal Description, Base part (Continued)

Terminal Name	**Value entered by**	**Default value**	**PC connection data type**	**Description**	**Remarks**
MINTCTL	user	OWN	–	Frequency **M**easure **INT**erval **C**on**T**ro**L**. Measure time controlled from own or other channel. Values: OWN, OTHER.	–
MINTSCR	user	TIMER	–	Frequency **M**easure **INT**erval **S**ou**RC**e. Controlled by timer (the measure interval is defined by MEASTIM) or by coincidence (the measure interval is started and stopped by coincidence). Values: TIMER, COINC	–

Measured values



Edit DB Terminal Values - DP800_1.1

Pulse : Measured values

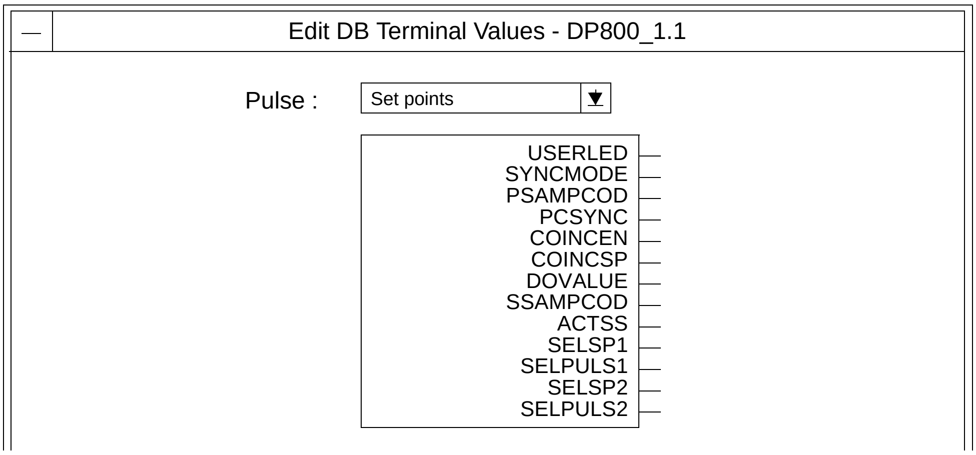
Terminal Description, Measured values

Terminal Name	**Value entered by**	**Default value**	**PC connection data type**	**Description**	**Remarks**
DI	system	–	B(r)	Current state of the **D**igital **I**nput signal.	–
UP	system	–	B(r)	**UP** direction.	–
POSMV	system	–	IL(r)	**POS**ition **M**easure **V**alue holds the actual or, when POSSAMP is true, the frozen value of the position counter.	268435456…+268435455.
POSOF	system	–	B(r)	**POS**ition **O**ver**F**low gives a pulse when POSMV exceeds its range.	–
SYNCRDY	system	–	B(r)	**SYNC**hronization **R**ea**DY** gives a pulse when Synchronization has occurred.	–
COINC	system	–	B(r)	**COINC**idence gives a pulse when coincidence has occurred.	–

Terminal Description, Measured values (Continued)

Terminal Name	**Value entered by**	**Default value**	**PC connection data type**	**Description**	**Remarks**
POSSAMP	system	–	B(r)	**POS**ition **SAMP**led value gives a pulse when POSMV is frozen.	–
SPEEDMV	system	–	R(r)	**SPEED M**easure **V**alue holds the actual or, when SSAMP is true, the frozen frequency value.	The values is not converted to Engineering Units.
SSAMP	system	–	B(r)	**S**peed **SAMP**le gives a pulse when SPEEDMV is frozen.	–

Set points



Edit DB Terminal Values - DP800_1.1

Pulse : Set points

USERLED
SYNCMODE
PSAMPCOD
PCSYNC
COINCEN
COINCSP
DOVALUE
SSAMPCOD
ACTSS
SELSP1
SELPULS1
SELSP2
SELPULS2

Terminal Description, Set points

Terminal Name	**Value entered by**	**Default value**	**PC connection data type**	**Description**	**Remarks**
USERLED	system	–	B(r/w)	Controls the **USER** defined **L**ight **E**mitting **D**iode on the front plate of the module.	–
SYNCMODE	system	–	I(r/w)	**SYNC**hronization **MODE** choice for the position counter.	See table “Synchronization mode“ below.

Terminal Description, Set points (Continued)

Terminal Name	**Value entered by**	**Default value**	**PC connection data type**	**Description**	**Remarks**
PSAMPCOD	system	–	I(r/w)	**P**osition **SAMP**ling **COD**e. Values: 0: Sampling for positive transition of DI 1: Sampling for negative transition of DI 2: Sampling when coincidence on own channel occurs. 3: Sampling when order is given from the simultaneous sampling function. 4: Sampling when coincidence on the other channel occurs.	–
PCSYNC	system	–	IL(r/w)	**P**osition **C**ounter **SYNC**hronization at positive transition if SYNCMODE = 1. The pulse must be long enough. Use SYNCRDY as an acknowledgment.	–
COINCEN	system	–	B(r/w)	**COINC**idence detection **EN**abling. If COINC = 0 the value of DOVALUE is forced to the digital output.	–
COINCSP	system	–	B(r/w)	**COINC**idence **S**et **P**oint. Comparing value for coincidence evaluation.	268435456…+268435455.
DOVALUE	system	–	B(r/w)	Controls the **D**igital **O**utput **VALUE** according to DOMODE.	–
SSAMPCOD	system	–	I(r/w)	**S**peed **SAM**Pling **COD**e. Values: 0: Sampling for positive transition of DI. 1: Sampling for negative transition of DI. 2: Sampling when coincidence occurs. 3: Sampling when order is given from the simultaneous sampling function.	–
ACTSS	system	–	B(r/w)	**ACT**ivates **S**imultaneous **S**ampling of the channels defined by SELSP1, SELSP2, SELPULS1, and SELPULS2.	Use these terminals only for channel 1 (data base element with item designation DP800_*x*.**1**). These terminals have no effect for elements representing channel 2.
SELSP1	system	–	B(r/w)	**SEL**ect simultaneous sampling of **SP**eed value channel **1**. Only valid if terminal ACTSS above also is activated.	
SELPULS1	system	–	B(r/w)	**SEL**ect simultaneous sampling of **PULS**e counter channel **1**. Only valid if terminal ACTSS above also is activated.	
SELSP2	system	–	B(r/w)	**SEL**ect simultaneous sampling of **SP**eed value channel **2**. Only valid if terminal ACTSS above also is activated.	
SELPULS2	system	–	B(r/w)	**SEL**ect simultaneous sampling of **PULS**e counter channel **2**. Only valid if terminal ACTSS above also is activated	

Pulse encoding

Terminal PLSMODE defines the method for pulse encoding:

- “A:UP/B:DOWN” should be entered for Up/Down pulse mode where Input A is used for up counting and Input B is used for down pulses.
- Quadrature pulse mode implies two phase shifted pulse signals on Input A and Input B.
  Enter “QUAD MODE*1” for multiplication factor 1
  Enter “QUAD MODE*2” for multiplication factor 2
  Enter “QUAD MODE*4” for multiplication factor 4
- “A:PULSE/B:DIR” should be entered for Count/Direction pulse mode where Input A is used for pulse counting and Input B is used for direction. High signal on Input B means up counting, and low means down counting.

Speed measurement

The DPS820 element does not do any scaling of the speed measure value for the SPEEDMV terminal.

In case of ERROR the SPEEDMV is forced to zero.

Transducer power failure

Transducer power failure is indicated by setting its frequency value to an illegal number (NAN, Not A Number). In this case terminal ERR = 1 and SPEEDMV is set to zero.

Coincidence set point

The coincidence set point value COINCSP is limited to -268435456…+268435455. (3 ½ bytes)

Digital Output mode

Terminal DOMODE defines the behavior of digital output:

- “COINC/TIMER”: DO is activated when coincidence occurs and inactivated after the time specified by DOTIME.
- “PC/TIMER”: DO is activated by positive transition of terminal DOVALUE and inactivated after the time specified by DOTIME.
- “PC/PC”: DO follows the value of terminal DOVALUE.
- “COINC/PC”: DO is activated when coincidence occurs if terminal DOVALUE is 1, and deactivated when DOVALUE goes to 0

Error Handling

The following error codes may appear on the ERRTYPE terminal:

Value	Description
0	Okay, no error.
6	Transducer power error.

Value	Description
7	Access error.
8	Set point value out of range.
10	Illegal channel for simultaneous sampling.

Synchronization mode

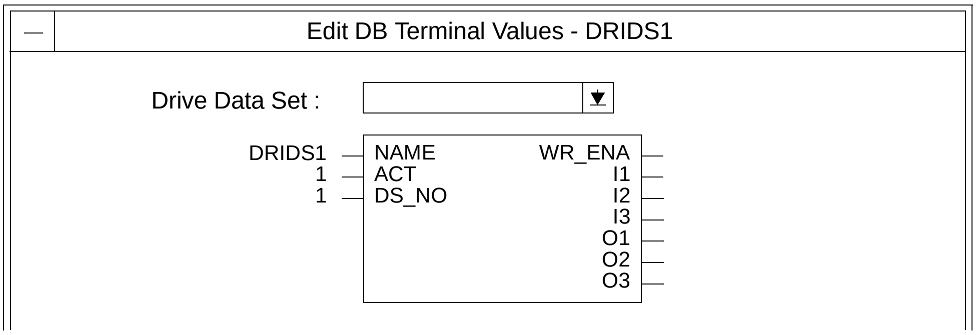
Use the following codes for terminal SYNCMODE:

Value	Description
0	Sync inhibit.
1	Sync on PCSYNC.
2	Sync on STROBE and UP direction.
3	Sync on STROBE and DOWN direction.
4	Sync on DI positive transition and UP direction.
5	Sync on DI positive transition and DOWN direction.
6	Sync on DI negative transition and UP direction.
7	Sync on DI negative transition and DOWN direction.
8	Sync on STROBE and DI high level and UP direction.
9	Sync on STROBE and DI high level and DOWN direction.
10	Sync on STROBE and DI low level and UP direction.
11	Sync on STROBE and DI low level and DOWN direction.
12	Sync on COINCidence.
13	Sync on COINCidence on the other channel.

Drive Data Set DRIDS

Summary

The Drive Data Set element is referenced by the Engineered drive data base element. It specifies a data package to be exchanged cyclical with the drive.



Terminal Description

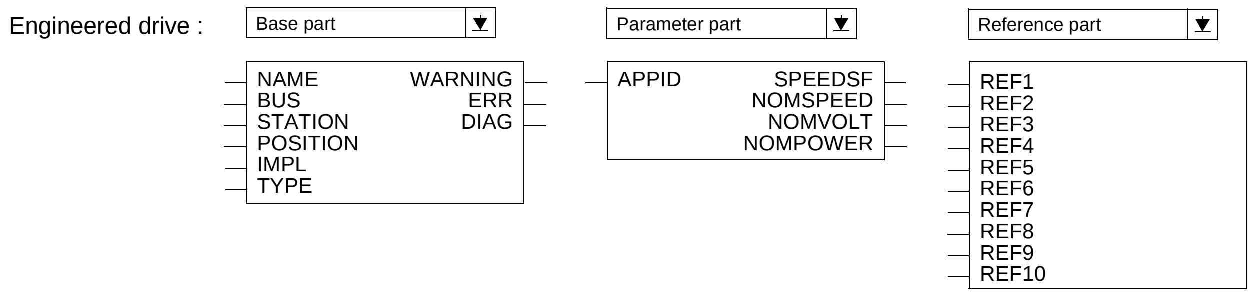
Terminal Name	Value entered by	Default value	PC connection data type	Description	Remarks
NAME	user	DRIDSx	–	Unique **NAME** of the data set.	Max. 20 characters.
ACT	user	1	–	Element is: 0 = not **ACT**ive 1 = **ACT**ive	Element must be referenced by an EVS(S) when ACT = 1.
DS_NO	user	1	I(r)	**D**ata **S**et **N**umber.	1 … 255
WR_ENA	system	–	B(r/w)	**WR**iting **ENA**bled. Enables writing the Drive Data Set.	–
I1	system	–	I(r/w)	Integer **1** of the data set transmitted.	–
I2	system	–	I(r/w)	Integer **2** of the data set transmitted.	–
I3	system	–	I(r/w)	Integer **3** of the data set transmitted.	–
O1	system	–	I(r/w)	Integer **1** of the data set received.	–
O2	system	–	I(r/w)	Integer **2** of the data set received.	–
O3	system	–	I(r/w)	Integer **3** of the data set received.	–

Engineered drive DRIENG

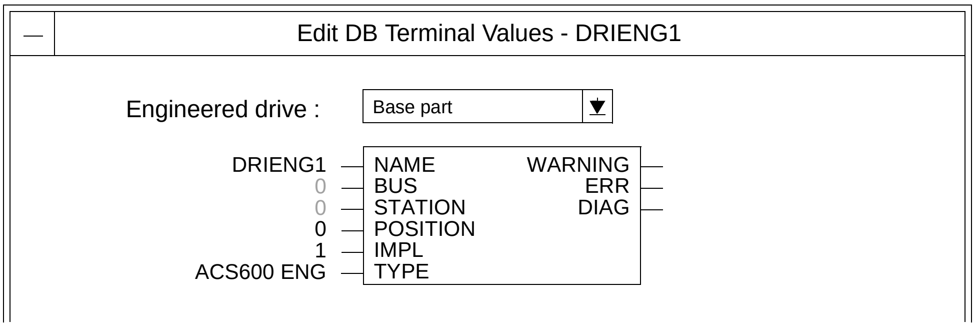
Summary

The DRIENG data base element specifies an Engineered drive hardware module on the module bus. By means of the call name DRIENG an Engineering Station will create 1 data base element of type Engineered drive.

Overview



Base part



DRIENG1 — NAME
0 — BUS
0 — STATION
0 — POSITION
1 — IMPL
ACS600 ENG — TYPE

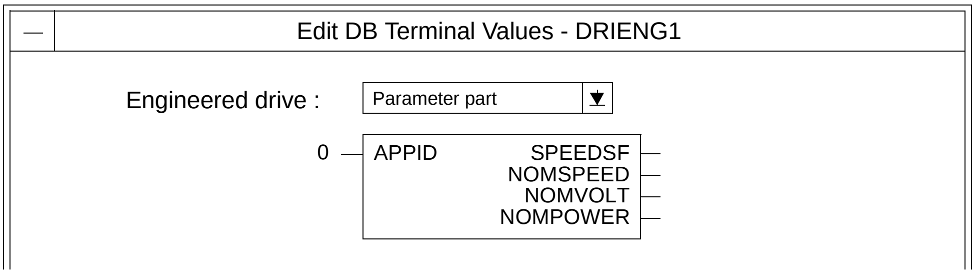
Terminal Description, Base part

Terminal Name	Value entered by	Default value	PC con-nection data type	Description	Remarks
NAME	user	DRIENGx	–	Unique **NAME** of the drive.	Max. 20 characters.
BUS	predef	0	–	**BUS** number. Part of address.	–
STATION	predef	0	–	**STATION** number. Part of address.	–
POSITION	user	0	–	**POSITION**. Part of address.	–

Terminal Description, Base part (Continued)

Terminal Name	Value entered by	Default value	PC connection data type	Description	Remarks
IMPL	user	1	–	**IMPL**emented. 0 = the drive is spare 1 = the drive is implemented	–
TYPE	user	ACS600 ENG	–	Module **TYPE**.	Max. 10 characters.
WARNING	system	–	B(r)	**WARNING** flag indicating non-fatal errors.	–
ERR	system	–	B(r)	**ERR**or flag indicating fatal errors.	–
DIAG	system	–	I(r)	**DIAG**nostics.	–

Parameter part



Edit DB Terminal Values - DRIENG1

Engineered drive : Parameter part

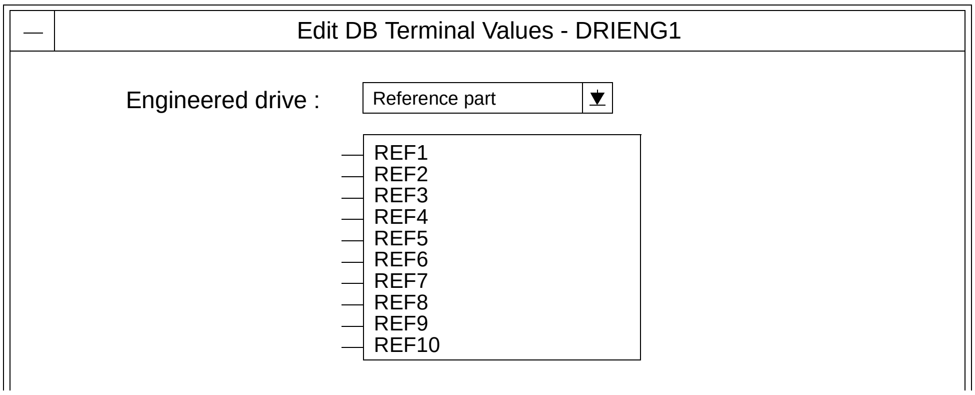
Terminal Description, Parameter part

Terminal Name	Value entered by	Default value	PC connection data type	Description	Remarks
APPID	user	0	–	**APP**lication **ID**entity which has to match with the application identity in the drive. 0: no match is required >0: match is required.	–
SPEEDSF	system	–	I(r)	**SPEED S**cale **F**actor is used in calculations to get the rpm of the motor.	Updated from drive when IMPL = 1 during configuration.
NOMSPEED	system	–	I(r)	**NOM**inal **SPEED** of motor. This value can be used by the application in calculations of the actual speed.	Updated from drive when IMPL = 1 during configuration.
NOMVOLT	system	–	I(r)	**NOM**inal **VOLT**age of the motor. This value can be used by the application in calculations of the actual voltage.	Updated from drive when IMPL = 1 during configuration.

Terminal Description, Parameter part

Terminal Name	**Value entered by**	**Default value**	**PC connection data type**	**Description**	**Remarks**
NOMPOWER	system	–	R(r)	**NOM**inal **POWER** of the motor. This value can be used by the application in calculations of the actual power.	Updated from drive when IMPL = 1 during configuration.

Reference part



Terminal Description, Reference part

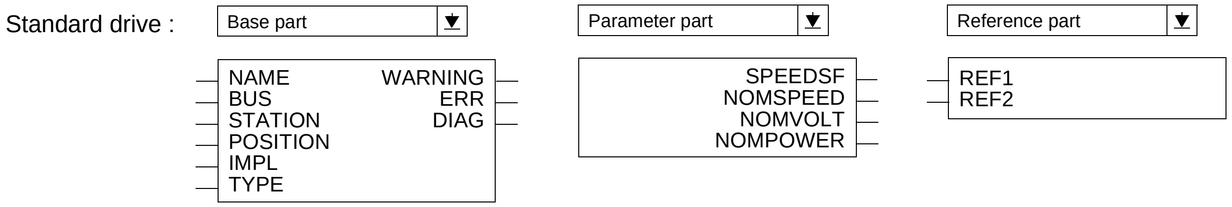
Terminal Name	**Value entered by**	**Default value**	**PC connection data type**	**Description**	**Remarks**
REF1	user	*	–	**REF**erence **1** to a DRIDS element.	Maximum 20 characters.
REF2	user	*	–	**REF**erence **2** to a DRIDS element.	Maximum 20 characters.
: : REF10	user	*	–	**REF**erence **10** to a DRIDS element.	Maximum 20 characters.

Standard drive — DRISTD

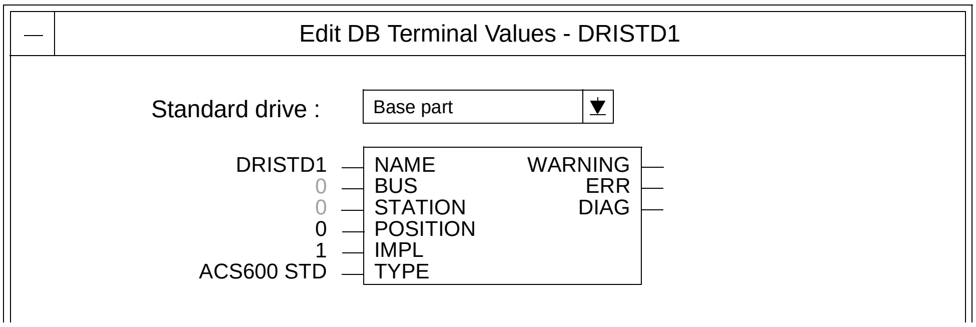
Summary

The DRISTD data base element specifies a Standard drive hardware module on the module bus. The Engineering Station will create 1 data base element of type Standard drive.

Overview



Base part



Edit DB Terminal Values - DRISTD1

Standard drive : Base part

DRISTD1 — NAME
0 — BUS
0 — STATION
0 — POSITION
1 — IMPL
ACS600 STD — TYPE

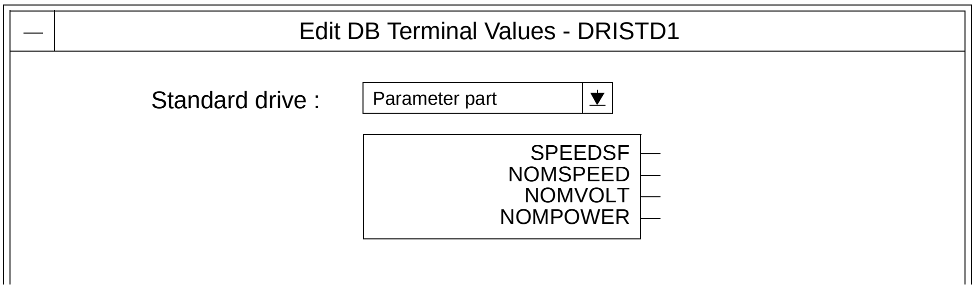
Terminal Description, Base part

Terminal Name	Value entered by	Default value	PC connection data type	Description	Remarks
NAME	user	DRISTDx	–	Unique **NAME** of the drive.	Max. 20 characters.
BUS	predef	0	–	**BUS** number. Part of address.	–
STATION	predef	0	–	**STATION** number. Part of address.	–
POSITION	user	0	–	**POSITION**. Part of address.	–

Terminal Description, Base part (Continued)

Terminal Name	**Value entered by**	**Default value**	**PC connection data type**	**Description**	**Remarks**
IMPL	user	1	–	**IMPL**emented. 0 = the drive is spare 1 = the drive is implemented	–
TYPE	user	ACS600 STD	–	Module **TYPE**.	Max. 10 characters.
WARNING	system	–	B(r)	**WARNING** flag indicating non-fatal errors.	–
ERR	system	–	B(r)	**ERR**or flag indicating fatal errors.	–
DIAG	system	–	I(r)	**DIAG**nostics.	–

Parameter part



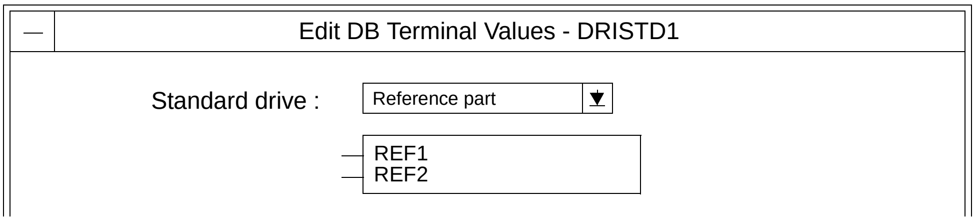
Edit DB Terminal Values - DRISTD1

Standard drive : Parameter part

Terminal Description, Parameter part

Terminal Name	**Value entered by**	**Default value**	**PC connection data type**	**Description**	**Remarks**
SPEEDSF	system	–	I(r)	**SPEED S**cale **F**actor is used in calculations to get the rpm of the motor.	Updated from drive when IMPL = 1 during configuration.
NOMSPEED	system	–	I(r)	**NOM**inal **SPEED** of motor. This value can be used by the application in calculations of the actual speed.	Updated from drive when IMPL = 1 during configuration.
NOMVOLT	system	–	I(r)	**NOM**inal **VOLT**age of the motor. This value can be used by the application in calculations of the actual voltage.	Updated from drive when IMPL = 1 during configuration.
NOMPOWER	system	–	R(r)	**NOM**inal **POWER** of the motor. This value can be used by the application in calculations of the actual power.	Updated from drive when IMPL = 1 during configuration.

Reference part



Standard drive : Reference part

Terminal Description, Reference part

Terminal Name	Value entered by	Default value	PC connection data type	Description	Remarks
REF1	user	*	–	**REF**erence **1** to a DRIDS element.	Maximum 20 characters.
REF2	user	*	–	**REF**erence **2** to a DRIDS element.	Maximum 20 characters.

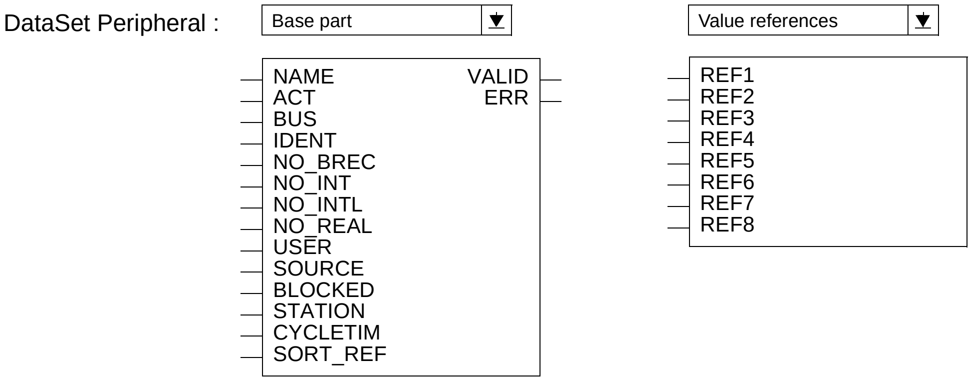
DataSet Peripheral DSP

Summary

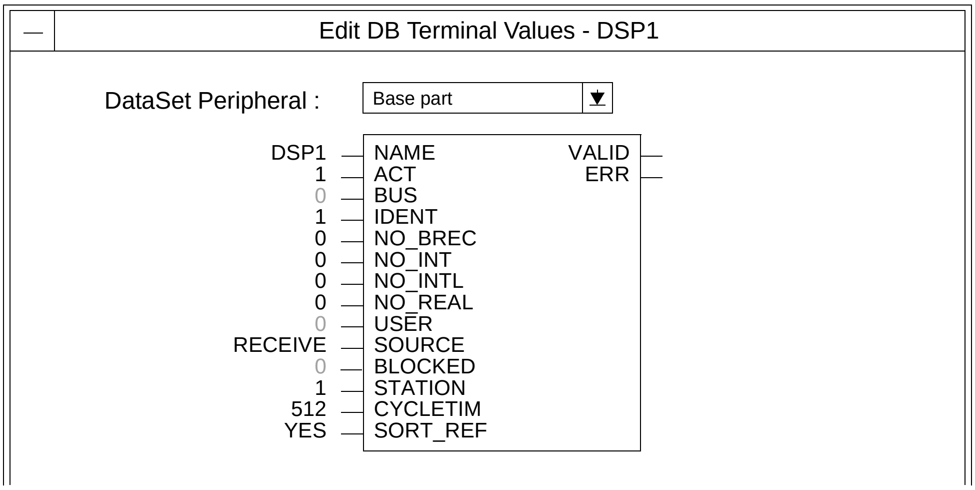
The DataSet Peripheral element represents a block of data to be received or sent over Advant Fieldbus 100 via Data Set Communication. With the element you select address, mode and data for one data set. The element defines the set, and contains references to separate DAT data base elements. In these DAT elements the data to be sent or received is stored.

The Engineering Station will create 1 data base element of type DataSet Peripheral.

Overview



Base part

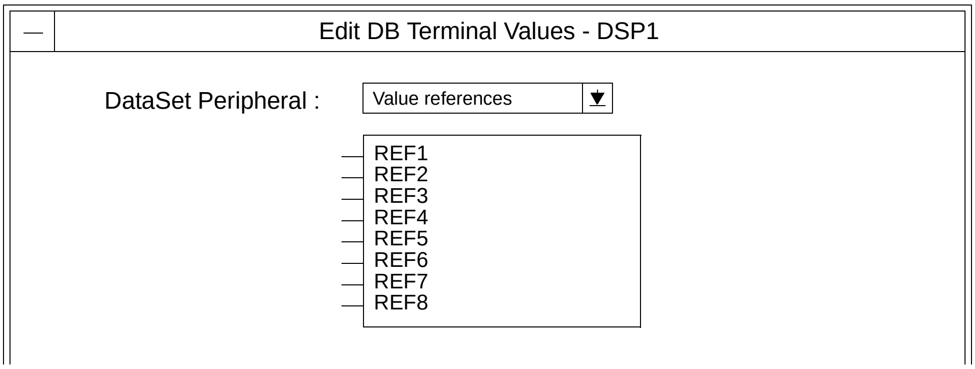


DSP1 — NAME
1 — ACT
0 — BUS
1 — IDENT
0 — NO_BREC
0 — NO_INT
0 — NO_INTL
0 — NO_REAL
0 — USER
RECEIVE — SOURCE
0 — BLOCKED
1 — STATION
512 — CYCLETIM
YES — SORT_REF

Terminal Description, Base part

Terminal Name	**Value entered by**	**Default value**	**PC connection data type**	**Description**	**Remarks**
NAME	user	DSPx	–	Each Data Set must have a unique **NAME**.	Max. 12 characters.
ACT	user	1	–	The element is: 0 = spare 1 = **ACT**ive	–
BUS	predef	0	–	**BUS** number of related bus.	For compatibility only.
IDENT	user	1	–	**IDENT**ifies the Data Set on the Advant Fieldbus 100.	1 … 50
NO_BREC	user	0	–	**N**umber of **B**oolean **REC**ords in the set.	0 … 8
NO_INT	user	0	–	**N**umber of **INT**eger records in the set.	0 … 8
NO_INTL	user	0	–	**N**umber of **INT**eger**L**ong records in the set.	0 … 8
NO_REAL	user	0	–	**N**umber of **REAL** records in the set.	0 … 8
USER	predef	0	–	**USER**. 0 = Advant Fieldbus 100 communication 1 = *not yet defined* 2 = *not yet defined*	–
SOURCE	user	RECEIVE	–	**SOURCE**. Defines the direction of the communication. Values: RECEIVE, SEND	–
BLOCKED	predef	0	–	For compatibility reason only.	–
STATION	user	1	–	**STATION** number.	1 … 80
CYCLETIM	user	512	–	**CYCLETIM**e. Transmission interval in milliseconds. Values: 1, 2, 4, 8, 16, 32, 64, 128, 256, 512, 1024, 2048, 4096	–
SORT_REF	user	YES	–	**SORT REF**erences. Values: NO = references not sorted YES = references sorted in the order B, I, IL, R	.–
VALID	system	–	B(r)	**VALID**. 1 = Data has been updated 0 = Data has not been received within 3×CYCLETIM. Not supported for sending.	–
ERR	system	–	B(r)	**ERR**or flag.	–

Value references



Edit DB Terminal Values - DSP1

DataSet Peripheral : Value references

Terminal Description, Value references

Terminal Name	**Value entered by**	**Default value**	**PC connection data type**	**Description**	**Remarks**
REF1	user	*	–	**REF**erence: Name of a DAT element.	–
REF2	user	*	–	**REF**erence: Name of a DAT element.	–
: : REF8	user	*	–	**REF**erence: Name of a DAT element.	–

Event Set (Send) EVS(S)

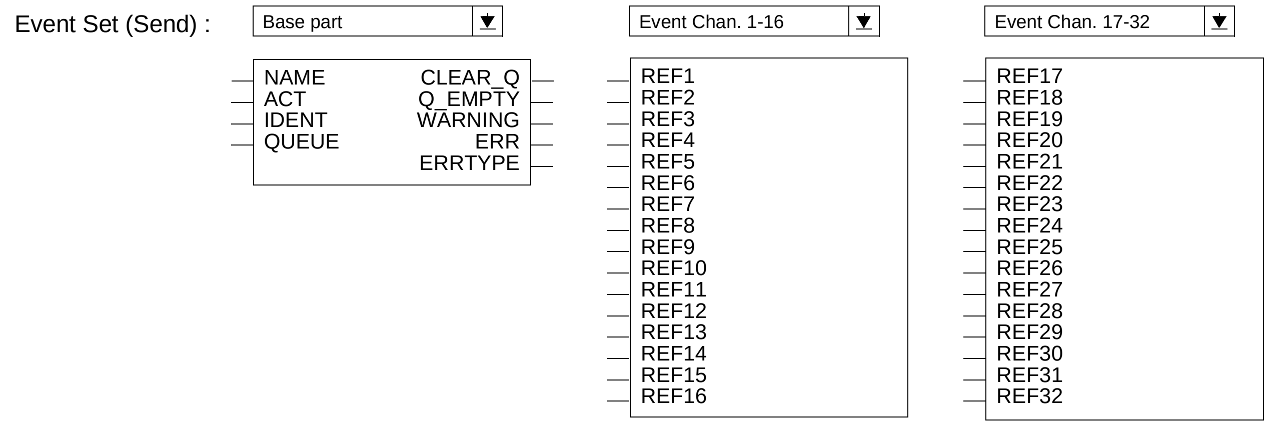
Summary

Event Set (EVS) elements are used for transport of time-tagged events from Advant Controller 70 to Advant Controller 400 Series. An Event Set element groups a set of Event Channels for sending or receiving of events.

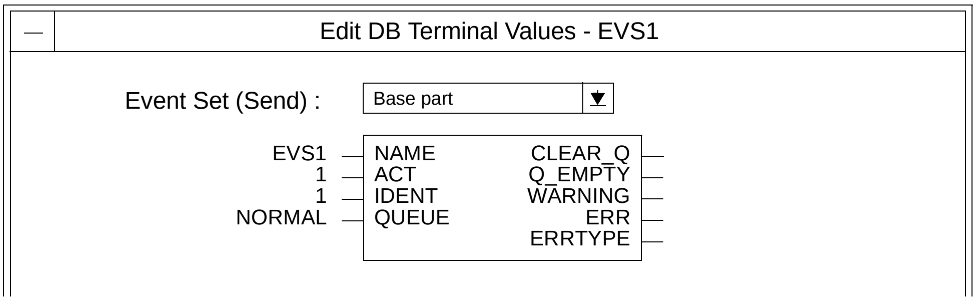
The Event Set (Send) element collects events from referenced Event Channel elements and sends them to the event receiver when requested.

The maximum number of Event Set elements is restricted to 16 per Advant Controller 70 station. An Event Channel element (AIC, DIC) may not be referenced by different EVS(S) elements.

Overview



Base part


Edit DB Terminal Values - EVS1

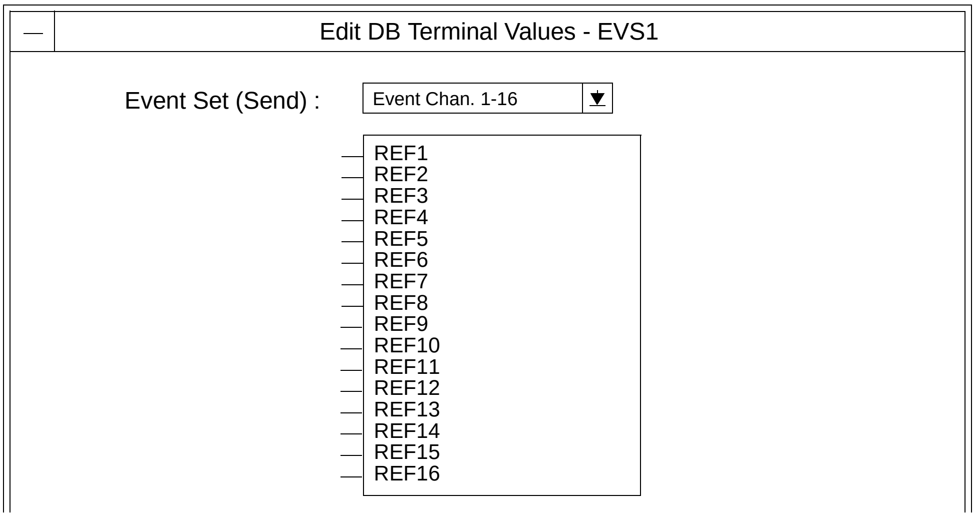
Event Set (Send) : Base part

EVS1 NAME
1 ACT
1 IDENT
NORMAL QUEUE

Terminal Description, Base part

Terminal Name	**Value entered by**	**Default value**	**PC connection data type**	**Description**	**Remarks**
NAME	user	EVSx	–	Unique **NAME** of the Event Set.	Max. 20 characters.
ACT	user	1	–	The element is: 0 = not **ACT**ive 1 = **ACT**ive	–
IDENT	user	1	–	**IDENT**ifies the Event Set element in the node.	1 … 65535 Not allowed to change on-line.
QUEUE	user	NORMAL	–	Specifies the size of the event **QUEUE**. Values: NORMAL (100 entries), EXTENDED (500 entries)	Not allowed to change on-line.
CLEAR_Q	system	–	B(r/w)	**CLEAR** event **Q**ueue. 0 = no action 1 = clear event queue	–
Q_EMPTY	system	–	B(r)	Flag indicating: 0 = Event **Q**ueue is not **EMPTY** 1 = Event **Q**ueue is **EMPTY**	–
WARNING	system	–	B(r)	**WARNING** flag indicating non-fatal errors.	–
ERR	system	–	B(r)	**ERR**or flag indicating fatal errors.	–
ERRTYPE	system	–	I(r)	Indicating **ERR**or **TYPE**.	See table.

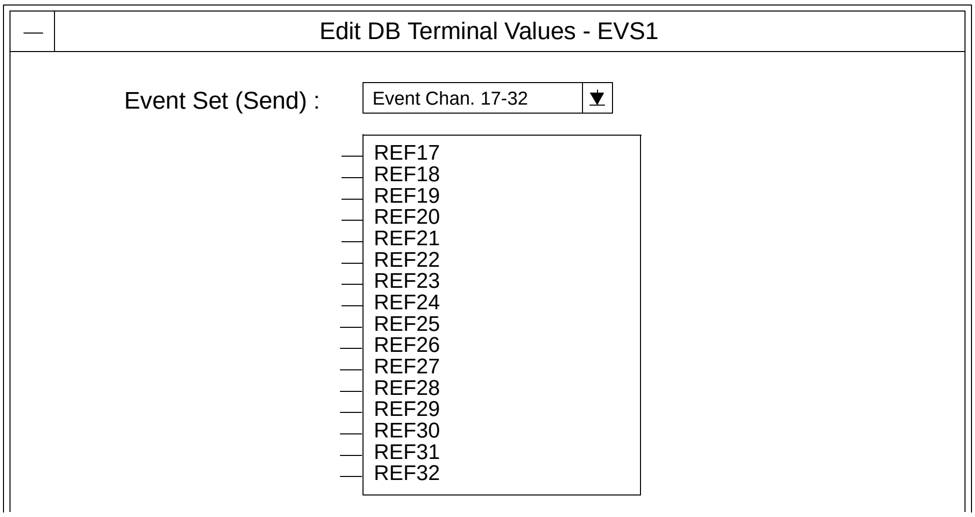
Event Chan. 1-16



Edit DB Terminal Values - EVS1

Event Set (Send) : Event Chan. 1-16

Event Chan. 17-32



Edit DB Terminal Values - EVS1

Event Set (Send) : Event Chan. 17-32

REF17
REF18
REF19
REF20
REF21
REF22
REF23
REF24
REF25
REF26
REF27
REF28
REF29
REF30
REF31
REF32

Terminal Description, Event Chan. 1-32

Terminal Name	Value entered by	Default value	PC connection data type	Description	Remarks
REF1	user	*	–	**REF**erence: Name of an Event Channel element.	(1)
REF2	user	*	–	**REF**erence: Name of an Event Channel element.	(1)
: : REF32	user	*	–	**REF**erence: Name of an Event Channel element.	(1)

(1) The REF1 to REF16 terminals are used to fill in the references to the event channels. References can be made to the DIC and AIC elements generating events.

Bit values of Terminal ERRTYPE

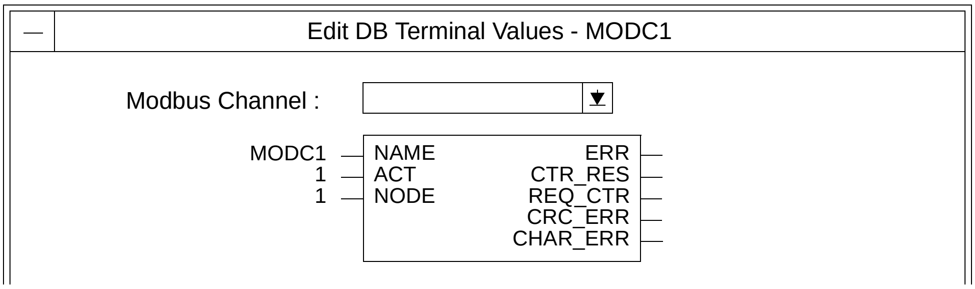
Bit	Description	Value of ERR, WARNING
0	Communication disturbed to at least one event source	WARNING = 1
1	Communication disturbed to at least one event target	WARNING = 1
2	Event source error	ERR = 1
3	Event target error	ERR = 1
4	Event queue filled to 80% or more for one or more event targets	ERR = 1
5	Event queue overflow for one or more targets	ERR = 1

Modbus Channel

MODCHAN

Summary

The Modbus Channel data base element specifies a Modbus communication channel for the second serial interface CH2 of the processor module (PM810). It supports a variable Modbus node address. If this data base element is not used, a fixed node address of 1 will be configured.



Edit DB Terminal Values - MODC1

Modbus Channel :

MODC1 — NAME
1 — ACT
1 — NODE

Terminal Description

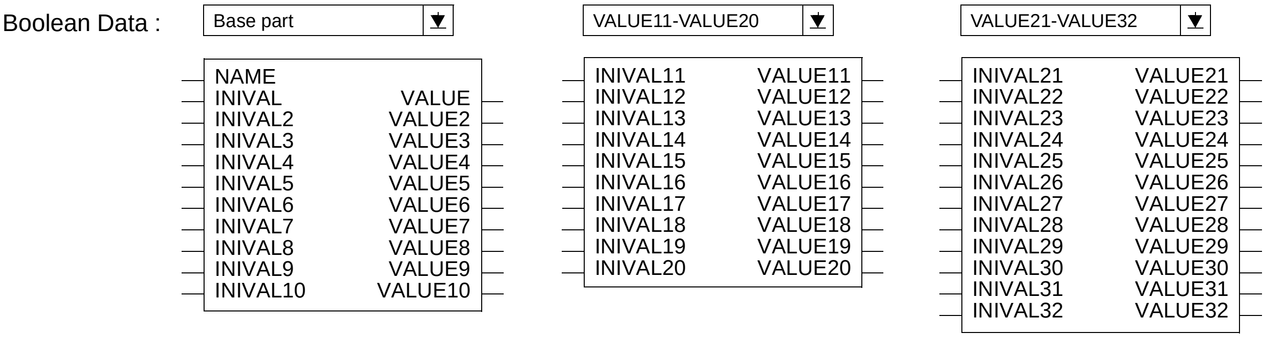
Terminal Name	Value entered by	Default value	PC connection data type	Description	Remarks
NAME	user	MODCx	–	Unique element **NAME**.	Max. 20 characters.
ACT	user	1	–	The element is: 0 = spare 1 = **ACT**ive	–
NODE	user	1	–	Own **NODE** number of Modbus channel.	1 … 254 Not allowed to change on-line.
ERR	system	–	B(r)	**ERR**or flag.	–
CTR_RES	PC	–	B(r/w)	**RES**et all **C**oun**T**e**R**s.	–
REQ_CTR	system/ PC	–	IL(r)	**REQ**uest **C**oun**T**e**R**. Counts all Modbus telegrams received.	–
CRC_ERR	system/ PC	–	IL(r)	**CRC ERR**or counter. Counts all CRC errors in telegrams received.	–
CHAR_ERR	system/ PC	–	IL(r)	**CHAR**acter **ERR**or counter. Counts all character errors in telegrams received.	–

Boolean Param PARDAT(B)

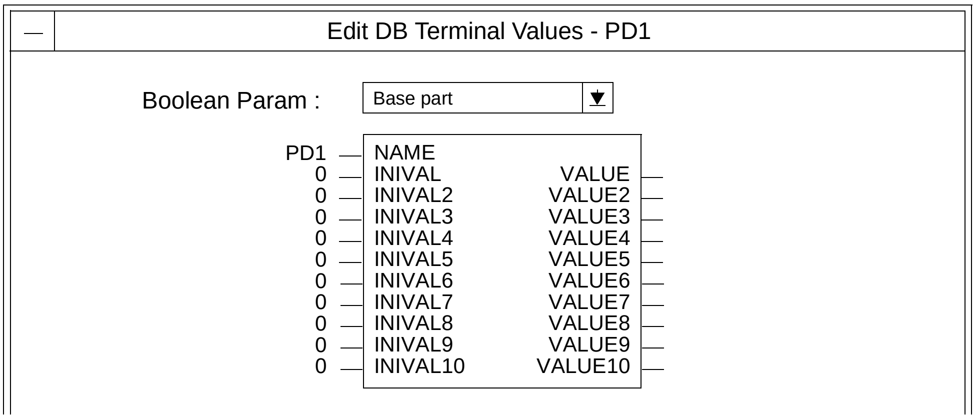
Summary

The PARDAT(B) data base element holds 32 packed boolean data values. Each data value is given an initial value. A name is given for the complete element.

Overview



Base part

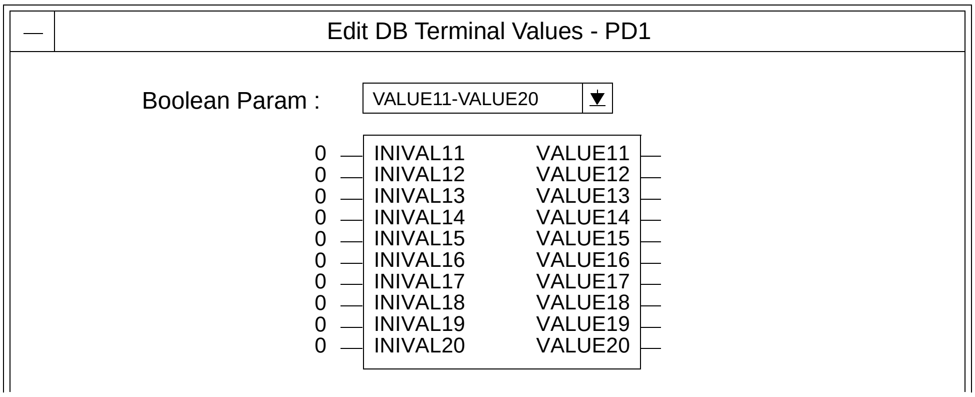


PD1 NAME
0 INIVAL
0 INIVAL2
0 INIVAL3
0 INIVAL4
0 INIVAL5
0 INIVAL6
0 INIVAL7
0 INIVAL8
0 INIVAL9
0 INIVAL10

Terminal Description, Base part

Terminal Name	**Value entered by**	**Default value**	**PC connection data type**	**Description**	**Remarks**
NAME	user	PDx	–	Unique element **NAME**.	Max. 20 characters.
INIVAL	user	0	–	**INI**tial **VAL**ue.	–
VALUE	system	–	B(r/w)	Boolean **VALUE**.	–
INIVAL2	user	0	–	**INI**tial **VAL**ue.	–
VALUE2	system	–	B(r/w)	Boolean **VALUE**.	–
: : INIVAL10	user	0	–	**INI**tial **VAL**ue.	–
VALUE10	system	–	B(r/w)	Boolean **VALUE**.	–

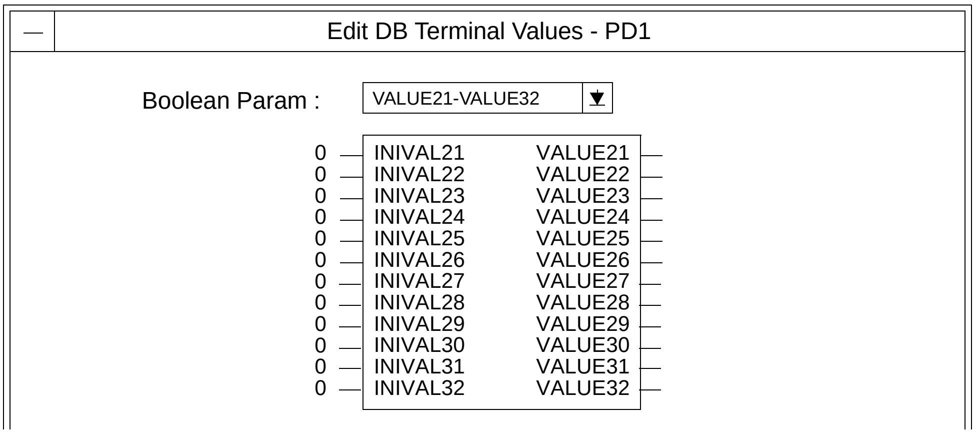
VALUE11-VALUE20



Edit DB Terminal Values - PD1

Boolean Param : VALUE11-VALUE20

VALUE21-VALUE32



Edit DB Terminal Values - PD1

Boolean Param : VALUE21-VALUE32

0	INIVAL21	VALUE21
0	INIVAL22	VALUE22
0	INIVAL23	VALUE23
0	INIVAL24	VALUE24
0	INIVAL25	VALUE25
0	INIVAL26	VALUE26
0	INIVAL27	VALUE27
0	INIVAL28	VALUE28
0	INIVAL29	VALUE29
0	INIVAL30	VALUE30
0	INIVAL31	VALUE31
0	INIVAL32	VALUE32

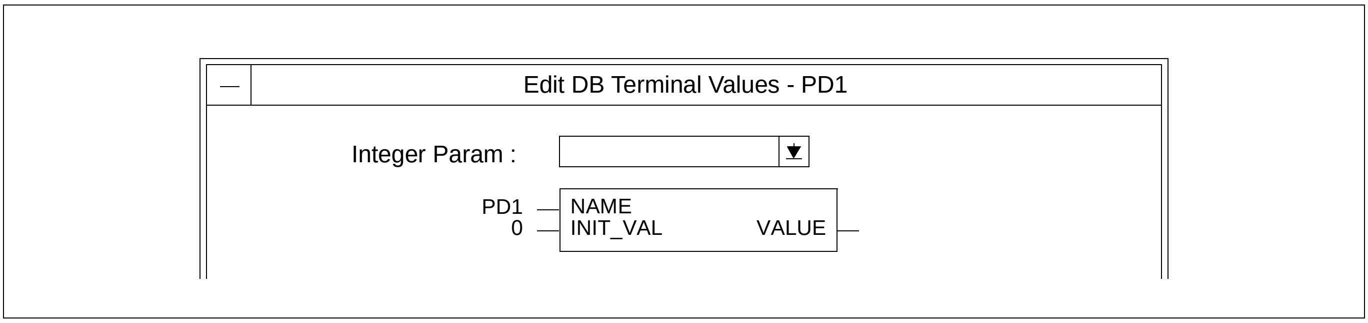
Terminal Description, VALUE11-32

Terminal Name	Value entered by	Default value	PC connection data type	Description	Remarks
INIVAL11	user	0	–	**INI**tial **VAL**ue.	–
VALUE11	system	–	B(r/w)	Boolean **VALUE**.	–
INIVAL12	user	0	–	**INI**tial **VAL**ue.	–
VALUE12	system	–	B(r/w)	Boolean **VALUE**.	–
: : INIVAL32	user	0	–	**INI**tial **VAL**ue.	–
VALUE32	system	–	B(r/w)	Boolean **VALUE**.	–

Integer Param PARDAT(I)

Summary

The PARDAT(I) data base element holds one 16 bit integer data value. The data value is given a name and an initial value.



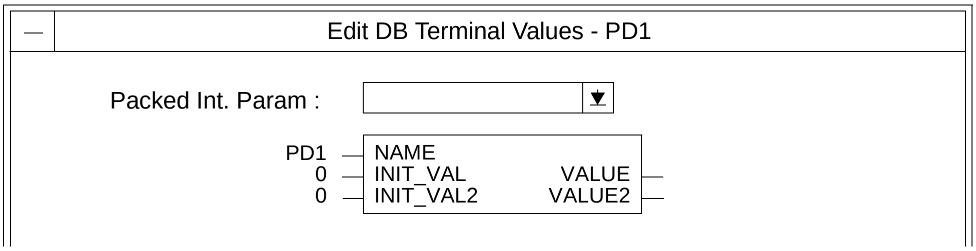
Terminal Description

Terminal Name	**Value entered by**	**Default value**	**PC connection data type**	**Description**	**Remarks**
NAME	user	PDx	–	Unique element **NAME**.	Max. 20 characters.
INIT_VAL	user	0	–	**INIT**ial **VAL**ue.	–
VALUE	system	–	I(r/w)	**VALUE** of type Integer.	–

Packed Int. Param PARDAT(II)

Summary

The PARDAT(II) data base element holds two 16 bit integer data values. The data values are given a name and an initial value.



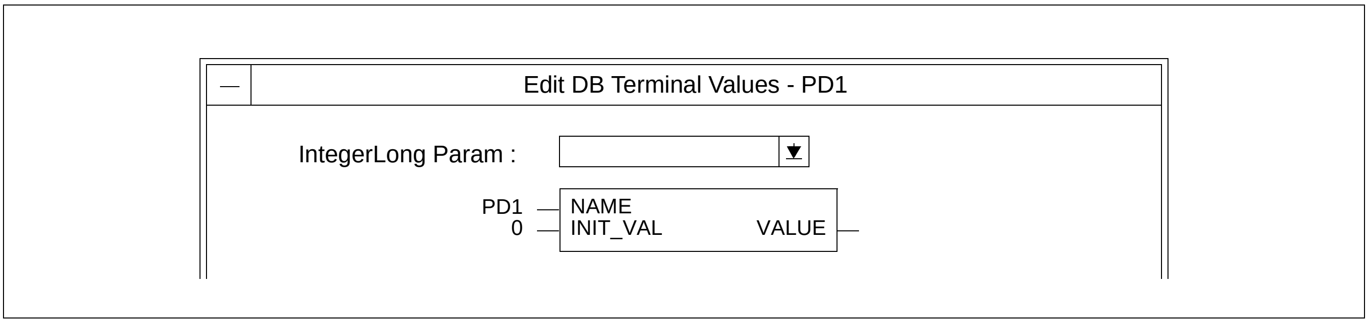
Terminal Description

Terminal Name	**Value entered by**	**Default value**	**PC connection data type**	**Description**	**Remarks**
NAME	user	PDx	–	Unique element **NAME**.	Max. 20 characters.
INIT_VAL	user	0	–	**INIT**ial **VAL**ue.	–
INIT_VAL2	user	0	–	**INIT**ial **VAL**ue **2**.	–
VALUE	system	–	I(r/w)	**VALUE** of type Integer.	–
VALUE2	system	–	I(r/w)	**VALUE 2** of type Integer.	–

IntegerLong Param PARDAT(IL)

Summary

The PARDAT(IL) data base element holds one 32 bit integer data value. The data value is given a name and an initial value.



Edit DB Terminal Values - PD1

IntegerLong Param :

PD1 — NAME
0 — INIT_VAL VALUE —

Terminal Description

Terminal Name	**Value entered by**	**Default value**	**PC connection data type**	**Description**	**Remarks**
NAME	user	PDx	–	Unique element **NAME**.	Max. 20 characters.
INIT_VAL	user	0	–	**INIT**ial **VAL**ue.	–
VALUE	system	–	IL(r/w)	**VALUE** of type IntegerLong.	–

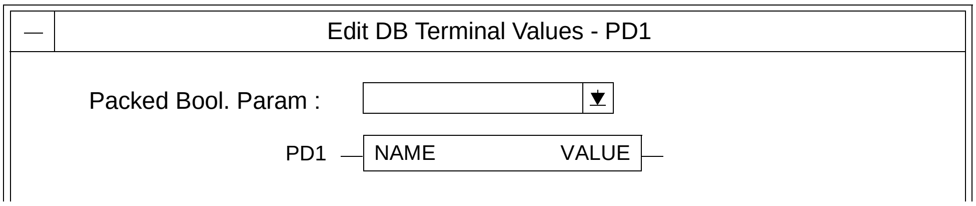
Packed Bool. Param PARDAT(NB)

Summary

The PARDAT(NB) data base element holds a data value representing 32 bit values.

The Engineering Station will create:

- 1 data base element of type Packed Bool. Param.
- 32 data base elements of type Boolean Value.



Edit DB Terminal Values - PD1

Packed Bool. Param :

PD1 — NAME VALUE —

Terminal Description

Terminal Name	**Value entered by**	**Default value**	**PC connection data type**	**Description**	**Remarks**
NAME	user	PDx	–	Unique element **NAME**.	Max. 20 characters.
VALUE	system	–	IL(r/w)	**VALUE** of type IntegerLong.	–

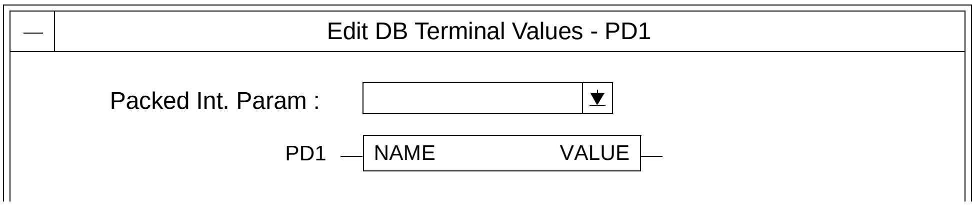
Packed Int. Param PARDAT(NI)

Summary

The PARDAT(NI) data base element holds a data value representing two 16 bit integer values.

The Engineering Station will create:

- 1 data base element of type Packed Int. Param.
- 2 data base elements of type Integer Value.



Edit DB Terminal Values - PD1

Packed Int. Param :

PD1 — NAME VALUE —

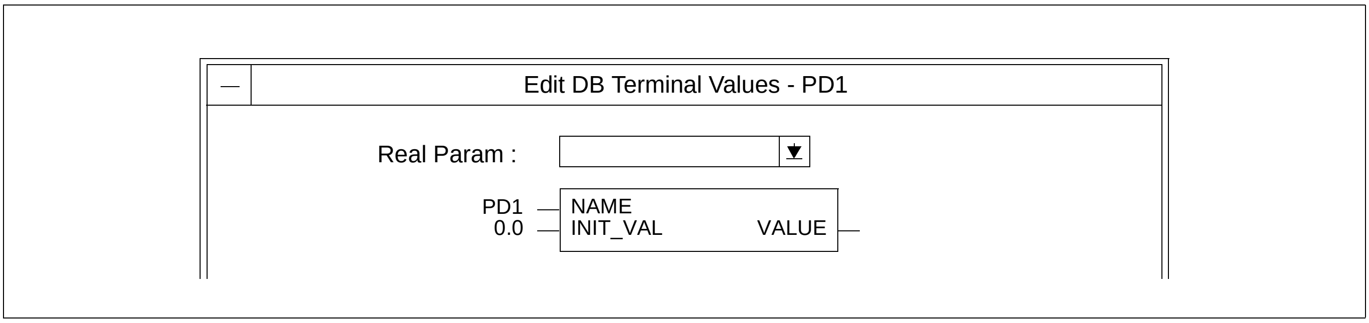
Terminal Description

Terminal Name	**Value entered by**	**Default value**	**PC connection data type**	**Description**	**Remarks**
NAME	user	PDx	–	Unique element **NAME**.	Max. 20 characters.
VALUE	system	–	IL(r/w)	**VALUE** of type IntegerLong.	–

Real Param PARDAT(R)

Summary

The PARDAT(R) data base element holds one real data value. The data value is given a name and an initial value.



Edit DB Terminal Values - PD1

Real Param :

PD1 — NAME
0.0 — INIT_VAL VALUE —

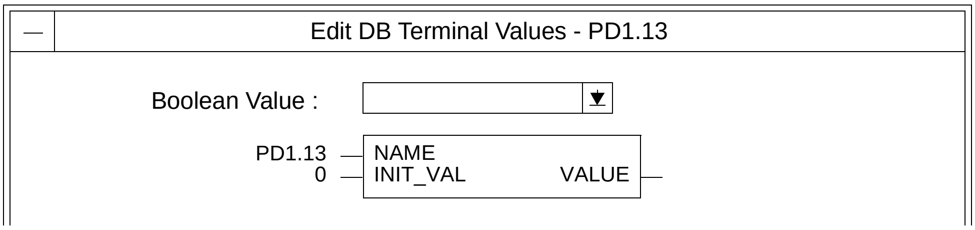
Terminal Description

Terminal Name	**Value entered by**	**Default value**	**PC connection data type**	**Description**	**Remarks**
NAME	user	PDx	–	Unique element **NAME**.	Max. 20 characters.
INIT_VAL	user	0.0	–	**INIT**ial **VAL**ue.	–
VALUE	system	–	R(r/w)	**VALUE** of type Real.	–

Boolean Value PARDATS(NB)

Summary

The PARDATS(NB) data base element holds one boolean data value. It is subordinate to the PARDAT(NB) data base element.



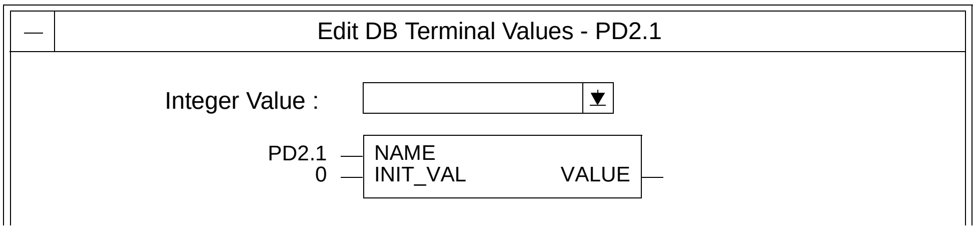
Terminal Description

Terminal Name	Value entered by	Default value	PC connection data type	Description	Remarks
NAME	user	PDx.y	–	Unique element **NAME**.	Max. 20 characters.
INIT_VAL	user	0	–	**INIT**ial **VAL**ue.	–
VALUE	system	–	B(r/w)	**VALUE** of type Boolean.	–

Integer Value PARDATS(NI)

Summary

The PARDATS(NI) data base element holds one 16 bit integer data value. It is subordinate to the PARDAT(NI) data base element.


Edit DB Terminal Values - PD2.1

Integer Value :

Terminal Description

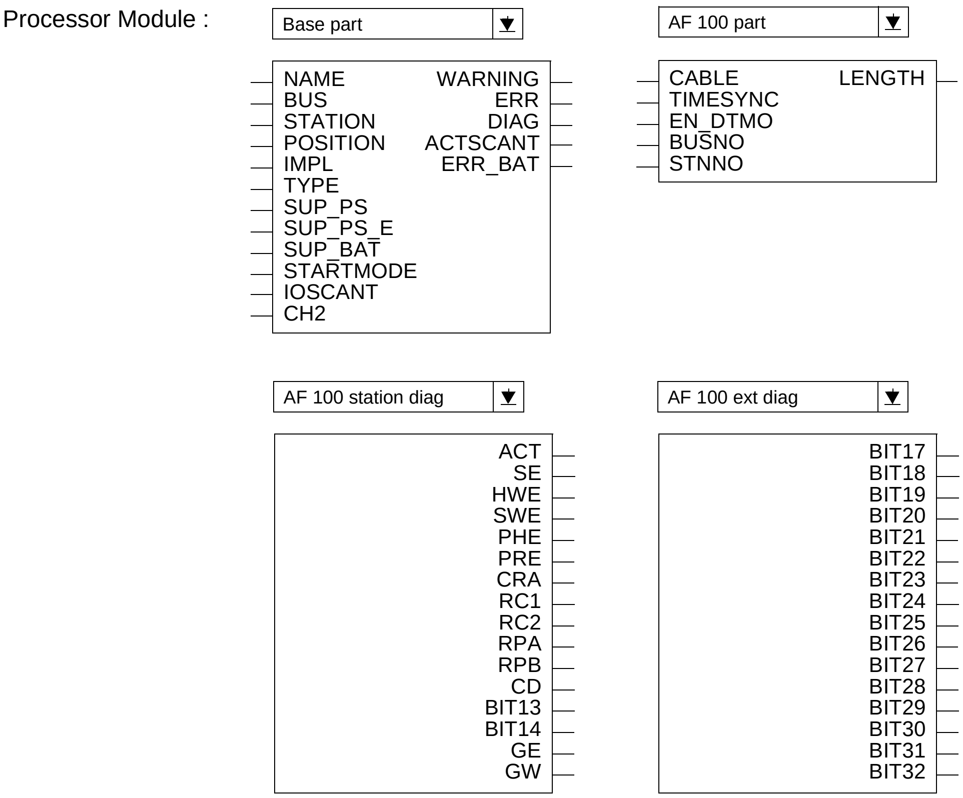
Terminal Name	Value entered by	Default value	PC connection data type	Description	Remarks
NAME	user	PDx.y	–	Unique element **NAME**.	Max. 20 characters.
INIT_VAL	user	0	–	**INIT**ial **VAL**ue.	–
VALUE	system	–	B(r/w)	**VALUE** of type Integer.	–

Processor Module PM810

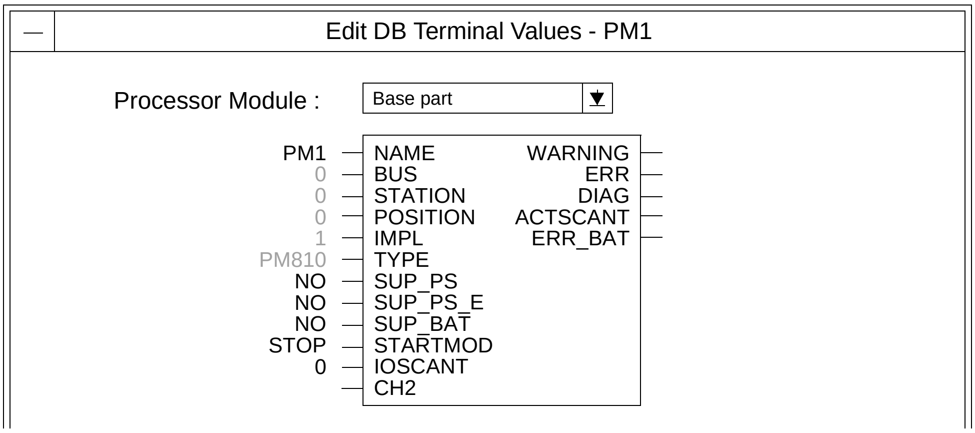
Summary

PM810 is the Processor Module (CPU) of the Advant Controller 70 Controller.

Overview



Base part



Processor Module : Base part

PM1	NAME	WARNING
0	BUS	ERR
0	STATION	DIAG
0	POSITION	ACTSCANT
1	IMPL	ERR_BAT
PM810	TYPE	
NO	SUP_PS	
NO	SUP_PS_E	
NO	SUP_BAT	
STOP	STARTMOD	
0	IOSCANT	
	CH2	

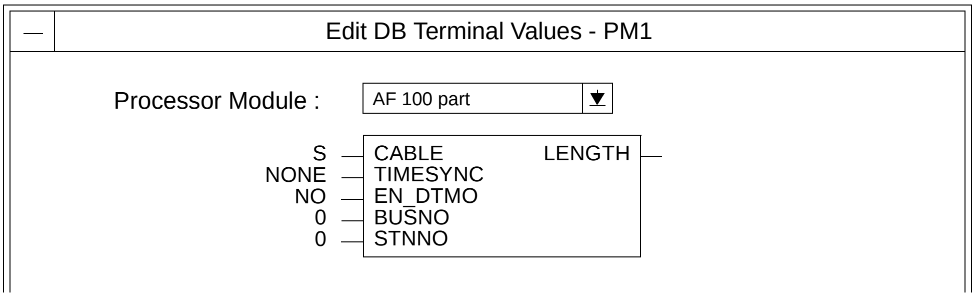
Terminal Description, Base part

Terminal Name	**Value entered by**	**Default value**	**PC connection data type**	**Description**	**Remarks**
NAME	user	PM1	–	Unique **NAME** of the module.	Max. 20 characters.
BUS	predef	0	–	**BUS** number.	–
STATION	predef	0	–	**STATION** number. Part of address.	–
POSITION	predef	0	–	**POSITION**. Part of address.	–
IMPL	predef	1	–	**IMPL**emented. 0 = the module is spare 1 = the module is implemented	–
TYPE	predef	PM810	–	Station **TYPE** designation.	–
SUP_PS	user	NO	–	Enable **SUP**ervision of redundant **P**ower **S**upplies. Values: YES = enabled NO = not enabled	–
SUP_PS_E	user	NO	–	Enable **SUP**ervision of redundant **P**ower **S**upplies on the opto-fibre **E**xpansion. Values: YES = enabled NO = not enabled	For future use.
SUP_BAT	user	NO	–	Enable **BAT**tery **SUP**ervision. Values: YES = enabled NO = not enabled	–
STARTMOD	user	STOP	–	Define **STARTMOD**e behavior. Values: AUTO, CLEAR, STOP	–
IOSCANT	user	0	–	Proposal for **IO SCAN**ning cycle time in ms.	0, 2, 4, 6, 8, 10, 12, …, 100

Terminal Description, Base part (Continued)

Terminal Name	Value entered by	Default value	PC con-nection data type	Description	Remarks
WARNING	system	–	B(r)	**WARNING** indicates a non-fatal error.	–
CH2	user	*	–	Reference by name to a Modbus Channel data base element defining the characteristics of the built-in serial interface on **CH**annel **2**.	–
ERR	system	–	B(r)	**ERR**or indicates fatal errors, such as configuration errors or hardware errors.	–
DIAG	system	–	I(r)	**DIAG**nostics.	See the table “DIAG (I/O modules)” in Introduction
ACTSCANT	system	–	I(r)	**ACT**ual **SCAN**ner cycle time.	–
ERR_BAT	system	–	B(r)	**BAT**tery **ERR**or.	–

AF 100 part



Edit DB Terminal Values - PM1

Processor Module : AF 100 part

```
         S —  CABLE          LENGTH —
      NONE —  TIMESYNC
        NO —  EN_DTMO
         0 —  BUSNO
         0 —  STNNO
```

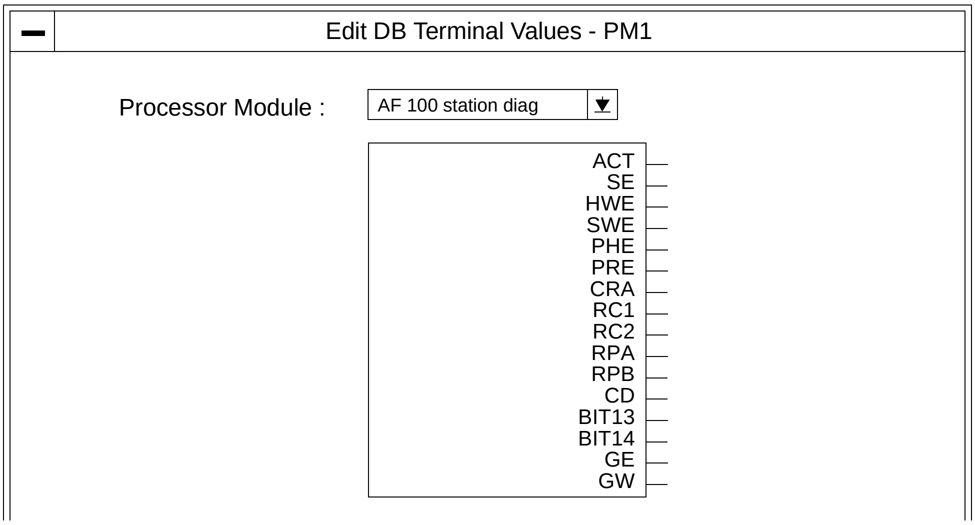
Terminal Description, AF 100 part

Terminal Name	Value entered by	Default value	PC con-nection data type	Description	Remarks
CABLE	user	S	–	**CABLE** connection. Values: S = Single R = Redundant	–
TIMESYNC	user	NONE	–	**TIME SYNC**hronization. Values: NONE, MASTER, SLAVE	–
EN_DTMO	user	NO	–	**EN**able **D**ouble **T**i**M**e-**O**ut. Enables longer time-out time.	Shall be set if any station on the bus has communication interface redundancy.
BUSNO	user	0	–	**BUS N**umber of the bus connected to this processor module.	0 … 255
STNNO	user	0	–	**ST**atio**N N**umber of the current station on the bus given by BUSNO.	0 … 80

Terminal Description, AF 100 part (Continued)

Terminal Name	Value entered by	Default value	PC connection data type	Description	Remarks
LENGTH	system	–	I(r/w)	Actual **LENGTH** of the cable configured at opposite Advant Controller 400 Series.	–

AF 100 station diag


Edit DB Terminal Values - PM1

Processor Module : AF 100 station diag

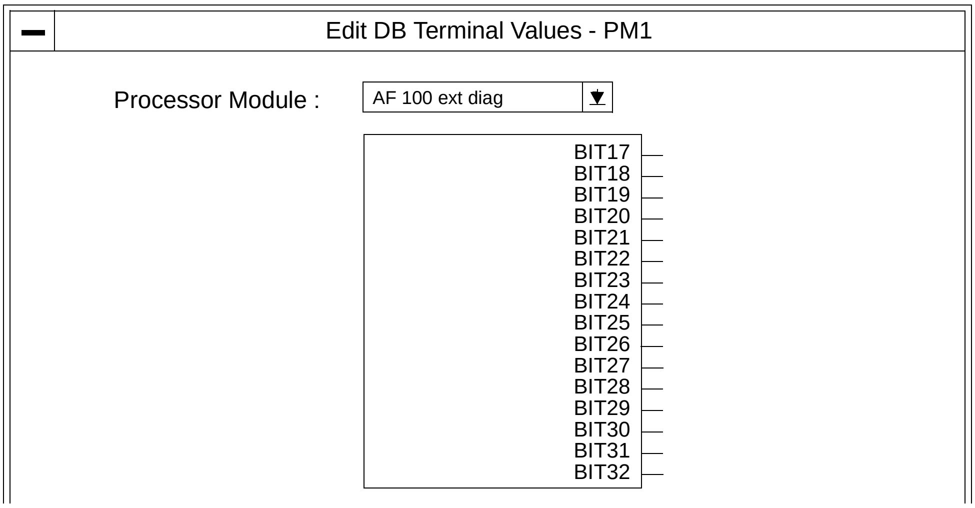
Terminal Description, AF 100 station diag

Terminal Name	Value entered by	Default value	PC connection data type	Description	Remarks
ACT	system	–	B(r)	Station is **ACT**ive in normal operation mode.	–
SE	system	–	B(r)	**S**evere **E**rror.	Check connected station.
HWE	system	–	B(r)	**H**ard**W**are **E**rror.	Non-fatal error in the connected station.
SWE	system	–	B(r)	**S**oft**W**are **E**rror.	Check application program in the connected station.
PHE	system	–	B(r)	**P**eripheral **H**ardware **E**rror.	Check hardware in connected station.
PRE	system	–	B(r)	**PR**ocess **E**rror.	Possible I/O hardware or input signal error in the connected station.
CRA	system	–	B(r)	**C**able **R**edundancy **A**vailable.	Station is configured to have redundant media.

Terminal Description, AF 100 station diag (Continued)

Terminal Name	**Value entered by**	**Default value**	**PC connection data type**	**Description**	**Remarks**
RC1	system	–	B(r)	**R**edundant **C**able **1** is bad.	Replace media (cable 1).
RC2	system	–	B(r)	**R**edundant **C**able **2** is bad.	Replace media (cable 2).
RPA	system	–	B(r)	**R**edundant **P**ower **A** failure.	Check power supply unit A.
RPB	system	–	B(r)	**R**edundant **P**ower **B** failure.	Check power supply unit B.
CD	system	–	B(r)	**C**hanged **D**iagnostics.	–
BIT13	system	–	B(r)	**BIT** number **13** of station diagnostics.	Reserved for future use.
BIT14	system	–	B(r)	**BIT** number **14** of station diagnostics.	Reserved for future use.
GE	system	–	B(r)	**G**eneral station **E**rror.	Check connected station.
GW	system	–	B(r)	**G**eneral **W**arning.	Check connected station.

AF 100 ext diag



Edit DB Terminal Values - PM1

Processor Module : AF 100 ext diag

Terminal Description, AF 100 ext diag

Terminal Name	**Value entered by**	**Default value**	**PC connection data type**	**Description**	**Remarks**
BIT17	system	–	B(r/w)	**BIT** number **17** of extended station diagnostics.	Reserved for future use.
: : BIT32	system	–	B(r/w)	**BIT** number **32** of extended station diagnostics.	Reserved for future use.

3BSE 009 456R301

November, 1999